Helpdesk / Technical Support Details

Swann Technical Support
All Countries E-mail: tech@swannsecurity.com
Telephone Helpdesk

USA toll free
1-800-627-2799
(Su, 2pm-10pm US PT)
(M-Th, 6am-10pm US PT)
(F 6am-2pm US PT)

AUSTRALIA toll free
1300 138 324
(M 9am-5pm AUS ET)
(Tu-F 1am-5pm AUS ET)
(Sa 1am-9am AUS ET)

USA Exchange & Repairs
1-800-627-2799 (Option 1)
(M-F, 9am-5pm US PT)

NEW ZEALAND toll free
0800 479 266

UK
0203 027 0979

Swann

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Swann *Advanced-Series*

8 Channel H.264 DVR

M82600_211111E

Swann

Easy Se

A Easy Set Up Components

or

8ch H.264 DVR

BNC to RCA Cable

Power Adapter Cable

DVR Power Adapter

Remote Control

Cameras and Accessories Optional

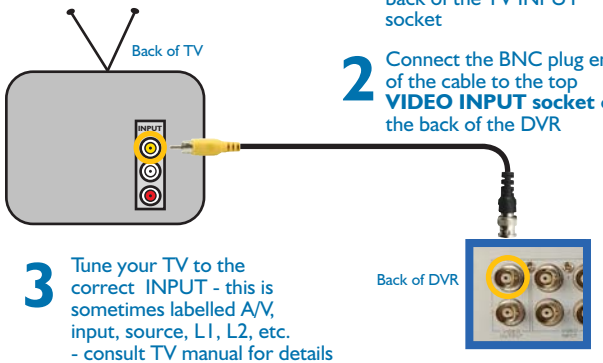
B

Cameras Optional

C Connecting the DVR to TV

1 Connect the RCA end of the RCA to BNC cable to the back of the TV INPUT socket

2 Connect the BNC plug end of the cable to the top **VIDEO INPUT socket** on the back of the DVR



3 Tune your TV to the correct INPUT - this is sometimes labelled A/V, input, source, L1, L2, etc. - consult TV manual for details

Warranty Information

Swann Communications USA Inc.
12636 Clark Street
Santa Fe Springs CA 90670
USA

Swann Communications
Unit 13, 331 Ingles Street,
Port Melbourne Vic 3207

Swann Communications LTD.
Stag Gates House
63/64 The Avenue
SO171XS
United Kingdom

Limited Warranty Terms & Conditions

Swann Communications warrants this product against defects in workmanship and material for a period of one (1) year from its original purchase date. You must present your receipt as proof of date of purchase for warranty validation. Any unit which proves defective during the stated period will be repaired without charge for parts or labor or replaced at the sole discretion of Swann. The end user is responsible for all freight charges incurred to send the product to Swann's repair centers. The end user is responsible for all shipping costs incurred when shipping from and to any country other than the country of origin.

The warranty does not cover any incidental, accidental or consequential damages arising from the use of or the inability to use this product. Any costs associated with the fitting or removal of this product by a tradesman or other person or any other costs associated with its use are the responsibility of the end user. This warranty applies to the original purchaser of the product only and is not transferable to any third party. Unauthorized end user or third party modifications to any component or evidence of misuse or abuse of the device will render all warranties void.

By law some countries do not allow limitations on certain exclusions in this warranty. Where applicable by local laws, regulations and legal rights will take precedence.

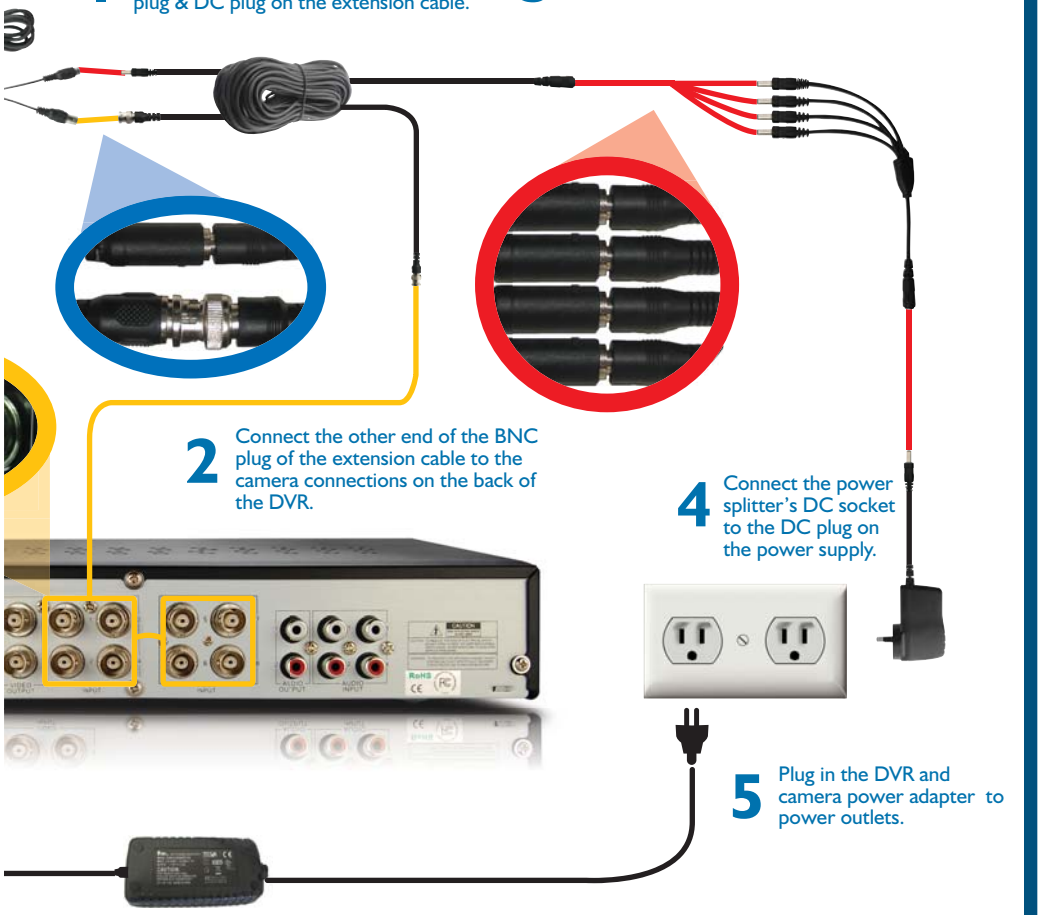
For Australia: Our goods come with guarantees which cannot be excluded under Australian Consumer Law. You are entitled to a replacement or refund for a major failure and for compensation for any other reasonably foreseeable loss or damage. You are also entitled to have the goods repaired or replaced if the goods fail to be of acceptable quality and the failure does not amount to major failure.

Technical Specifications

Video Compression		H.264
Video System		NTSC / PAL
Operating System		Linux
Input/Output	Video	BNC: 8-ch inputs / BNC: 2-ch output / VGA: 1 output
	Audio	RCA :4-ch inputs / RCA: 2-ch outputs
Display	Resolution	NTSC: 704 x 480 / PAL: 704 x 576 VGA: 800 x 600, 1024 x 768, 1280 x 1024,1440 x 900
	Frame Rate	NTSC: 240fps / PAL: 200fps (shared by 8 channels)
	Aspect Ratio	4:3 (PAL, NTSC, VGA) ,16:10 (VGA)
Record	Resolution	NTSC: CIF(352x240) / HD1(704x240) / D1(704x480) PAL: CIF(352x288) / HD1(704x288) / D1(704x576)
	Frame Rate	NTSC: 60fps-D1 / 120fps-HD1 / 240fps-CIF (shared by 8 cameras) PAL: 50fps-D1 / 100fps-HD1 / 200fps-CIF (shared by 8 cameras)
Feature	Display	Single / Quad (2 x 2) / All (3 x 3) / SEQ
	Recording	Best / Good / Normal
Record Modes		Manual / Motion Detection / Schedule
HDD	Interface	1*SATA Fixed HDD
	Capability	SATA up to 2000GB (2TB)
Playback Search		Time & Date / Event Lists
USB Interface		USB 2.0 for Mouse and File Backup / Upgrade
PTZ Control		Built-in RS-485 / support PELCO-P & PELCO-D
LAN/Network Interface		RJ45, 10M/100M
Network Protocol		Support TCP/IP, DHCP, DDNS, PPPoE, Static, UPnP
Network Function		Supports live viewing with (Internet Explorer) & selected smartphones
Backup		via USB flash
Recording Pack Time		15 / 30 / 45 / 60 mins selectable
IR Remote Control		Included
Mouse		USB (Included)
Power Supply		DC12V
Dimensions		12.4" x 8.9" x 2.4" 315mm x 225mm x 60mm"
Weight		4.4lbs / 2kg

tup Guide 8ch H.264 DVR

Camera Connections


1 Connect the camera cable's BNC socket & DC socket to the BNC plug & DC plug on the extension cable.
2 Connect the other end of the BNC plug of the extension cable to the camera connections on the back of the DVR.
3 Connect the DC power sockets on the extension cables to the power splitter's DC plugs.
4 Connect the power splitter's DC socket to the DC plug on the power supply.
5 Plug in the DVR and camera power adapter to power outlets.

8-2550-2600-M13102011

Before you begin

FCC Verification

NOTE: This equipment has been tested and found to comply with the limits for Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna
- Increase the separation between the equipment and the receiver
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected
- Consult the dealer or an experienced radio/TV technician for help

These devices comply with part 15 of the FCC Rules. Operation is subject to the following two conditions:

1. These devices may not cause harmful interference, and
2. These devices must accept any interference received, including interference that may cause undesired operation.

IMPORTANT NOTE:

All jurisdictions have specific laws and regulations relating to the use of cameras. Before using any camera for any purpose, it is the buyer's responsibility to be aware of all applicable laws and regulations that prohibit or limit the use of cameras and to comply with the applicable laws and regulations.

FCC Regulation (for USA): Prohibition against eavesdropping

Except for the operations of law enforcement officers conducted under lawful authority, no person shall use, either directly or indirectly, a device operated pursuant to the provisions of this Part for the purpose of overhearing or recording the private conversations of others unless such use is authorized by all of the parties engaging in the conversation.

WARNING

Modifications not approved by the party responsible for compliance could void user's authority to operate the equipment.

IMPORTANT SAFETY INSTRUCTIONS

- Make sure product is fixed correctly and stable if fastened in place
- Do not operate if wires and terminals are exposed
- Do not cover vents on the side or back of the DVR and allow adequate space for ventilation

DEFAULT PASSWORD INFORMATION

To ensure your privacy, this DVR supports password protection.

- **The default, all-access username is "admin".** If the DVR asks you to log in before you've set a password, enter **admin** as your username and leave the password blank. This will give you access to all areas of the DVR.
- There is no "default" password - until you set a password and enable password protection, the DVR will not ask you for one.
- To ensure your ongoing privacy, **we strongly recommend setting a password as soon as possible**. Choose something that you'll remember, but that others would be unlikely to guess.
- If you do manage to lock yourself out of the DVR, you'll need to contact us at the Swann Technical Support Telephone Helpdesk - the number is on the back cover.

Troubleshooting

Problem: I'm not seeing a mouse cursor, and I can't open any menus!

Solution: The *Output Device* probably needs to be changed. Press the "0" (zero) key on the remote control to swap primary output between the composite and VGA outputs. See ***"Video / Audio Setup Menu" on page 56*** for more information.

Problem: I'm not getting a picture on my TV or monitor!

Solution: There are a couple of things that could be going on. Here are a couple of theories:

- If you've connected the DVR to a TV via the VIDEO OUT port, ensure that the composite video cable (BNC to RCA) connects the MAIN VIDEO OUT on the DVR to a VIDEO IN on your television. Check that the TV is set to the right channel (AV, Channel 0, Video, Composite). Try using a different video input on the television. Try using a different cable. If all else fails, it's time for a different TV!

Problem: My DVR does not switch on.

Solution: Make sure you have plugged in the power supply (12V) to the DVR and into the wall socket. Carefully check the integrity of the connections. Try another power socket.

Problem: My display is showing "NO HARD DISK" when I press record.

Solution: If you have recently changed the hard drive in your DVR unit make sure it is plugged in properly; otherwise the hard drive may be faulty. Try connecting another (working) hard drive to the DVR; if this still doesn't work then the DVR maybe faulty. We suggest calling Swann Technical Support. The contact information is on the rear cover of this booklet.

Problem: I am not getting pictures from my cameras on any of my displays.

Solution: Make sure the cameras are connected properly to the DVR and their power supplies (usually about 12V, but some cameras have different requirements - particularly when one power supply is used for multiple cameras). Check that the cables are not the bits at fault by connecting the cameras directly to the DVR or to a TV (if you have the proper adapters).

Problem: One of the displays is not showing on my screen.

Solution: Make sure all cameras are set to ON in CAMERA SETUP. Check the integrity of your cables and connections. Check the power supply to the camera. Try attaching another channel to the questionable input.

Problem: I cannot login to my DVR remotely using the Internet Explorer browser.

Solution: Make sure you have configured the IP, ActiveX and USER SETUP correctly. Remember the **user password** may be different to the **admin password**. The **admin password** is used to login to the DVR remotely.

Problem: I cannot copy files off the DVR.

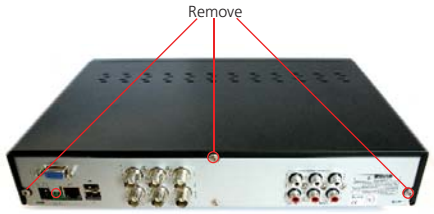
Solution: Make sure the DVR is connected to a USB flash drive, and that the USB flash drive is formatted to have a FAT32 file system. Some flash drives are not compatible with the DVR (these are rare) because they use an uncommon USB device class - in these cases, try using a different USB flash drive.

Changing or Installing the Hard Drive

Note: the following instructions are for installing or changing the hard drive. If your DVR already has a hard drive pre-installed, and you don't want to change it, disregard these steps.

1. Ensure the DVR is switched off and unplugged from mains power.
2. Locate and remove the 4 screws on the rear of the DVR, and the 2 from each side.
3. Pull up the top case of the DVR.
4. Locate the 2 screws holding down the hard drive chassis. Remove these screws and remove the HDD from the DVR.
5. Push the metal clip on the SATA cable (single red or orange cable) to unplug the cable from the hard drive. Unplug the power cable (2 black, 1 yellow, and 1 red cable) from the back of the hard drive.
6. If replacing the hard drive, put the new hard drive into the chassis.
7. Screw in the hard drive to chassis as in step 5, and attach the chassis to the DVR case as in step 4. Remember - the HDD goes in upside down, as shown in the image to the right.
8. Replace the top of the case.
9. Screw in the remaining screws to the sides and back of the DVR as in step 2.

3



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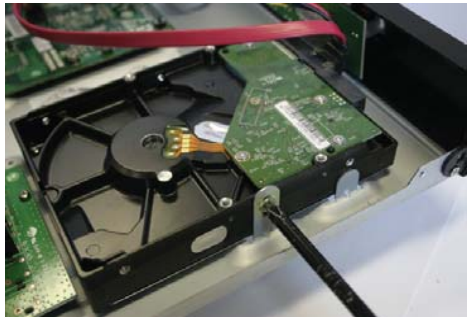
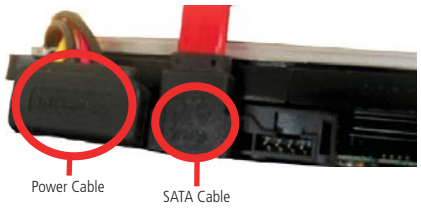


5



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Overview

Congratulations on your purchase of this *Swann* DVR!

You've chosen a versatile, powerful and great value security monitoring and recording solution for your home or business. Let's just take a moment to talk about some of the great features that the DVR offers and some of the things to think about before installing the system.

8 Channel Monitoring and Recording

The DVR can monitor and record eight channels simultaneously. You can configure the recording modes for each of the eight channels independently. For example, you could have four channels recording on a schedule, two recording constantly and two armed to record on motion. Or any other combination you can think of!

Powerful H.264 Compression

The advanced video codec used by the DVR, called H.264, offers high quality video files at a fraction of the size of older video codecs such as MPEG-2 or similar. Basically, this means you can store more footage on the DVR's hard drive, and that the quality of that footage can be significantly higher than many older video formats. H.264 has been engineered to provide the highest level of data compression possible (saving space on your hard drive) whilst maintaining a high image quality.

Powerful Networking and Remote Access Features

The DVR features an Ethernet port, which can be used to connect the DVR to your local area network (LAN). With the addition of a high-speed Internet service, this allows you to remotely access the DVR from any high-speed Internet terminal on Earth! If that isn't convenient enough, the DVR also features mobile device support, allowing you to connect to it from a device running:

- *iOS (iPhone 3GS or later, iPad)*
- *Android (version 2.1 or higher)*
- *BlackBerry OS (version 5)*
- *Microsoft Windows Mobile® 6.1 (or higher) Professional*
- *Symbian (S60, 3rd or 5th edition)*

Multiple Monitor Connections

Not only does the DVR come with multiple video out ports (allowing you to connect it to two televisions at once) it also comes with a VGA output, allowing you to connect the DVR to a computer monitor. The VGA connection allows for a much higher quality picture than traditional composite video connections, boasting resolutions of up to 1440 x 900 pixels.

Preparing your Mobile Device

Mobile technology is becoming increasingly advanced, and the rate of change is increasing. We're constantly updating software to keep up with the evolution of handsets and other devices available, and developing new apps (or "applications", for those who still prefer whole words) for other operating systems and hardware.

Thus, we can't tell you exactly how to prepare your mobile device here. Firstly, there isn't enough space on this page to cover all compatible mobile devices. More importantly, any information we print will probably be out of date by the time you read it!

Check out:

www.swannsecurity.com/mobile

for guides to set up common mobile devices for use with the DVR.

Supported Mobile Platforms

At the time of writing, the DVR supports a mobile device (such as a cellphone, tablet, PDA or similar) on a 3G network running:

- *iOS (iPhone 3GS or later, iPad)*
- *Android (version 2.1 or higher)*
- *BlackBerry OS (version 5)*
- *Microsoft Windows Mobile® 6.1 (or higher) Professional*
- *Symbian (S60, 3rd or 5th edition)*

Some devices may require access to a local area network with Internet access to function correctly, whilst others are able to use mobile Internet (such as HSDPA or similar protocol). It depends on the hardware in your specific device, and there are too many devices out there these days to offer any kind of comprehensive list.

Disclaimer: We can't guarantee that your mobile device will be compatible with this DVR, even if it has one of the operating systems listed above. Your specific model of phone, tablet or other device, the hardware it contains (and the revision thereof), your service provider, the types of data services they offer and your specific phone/device plan will all affect the performance of your mobile device for remote access of the DVR.

At the time of writing, the DVR supports up to 4 users via mobile devices simultaneously.

Remote Access from a Mobile Device

The DVR supports access from mobile devices such as iPhone, iPad and the increasingly popular Android operating system. To correctly configure your DVR for remote access via a mobile device, or indeed any remote access, it is important to have your network and Internet connection configured correctly. Typically, this is matter of forwarding ports from your router to specific devices (in this case, your DVR).

Requirements

To access the DVR via a mobile device, the following conditions must be met:

- A high-speed Internet connection with an upload speed in excess of 256kbps (ideally above 512kbps).
- The DVR attached to this high-speed Internet connection.
- Your home network correctly configured to allow the DVR's SERVER PORT unrestricted access to the Internet. Typically, this requires enabling UPnP (recommended) or forwarding ports (not recommended).
- A compatible mobile device with a supported platform (see below).
- The correct application(s) installed on your mobile device.
- A sufficient signal to your mobile device (areas with intermittent coverage or low signal strength will adversely affect the playback).

Setting up the DVR for Mobile Access

1. Enter the **Main Menu**.
2. Navigate to **Network**, and locate the field titled **Mobile Port**.
3. Ensure that the value listed is unique on your network, and make a note of it. The default value is **18004**. Note: that, if UPnP is not enabled, this port will need to be properly forwarded from your router to ensure that it can be accessed remotely.
4. The **PASSWORD** for mobile access is the same as the **admin** account password.

Note: If you want to access the DVR via a mobile device, then you'll need to use the **admin** password to access it. We strongly advise setting password on the **admin** account to prevent unauthorized remote access.

Installation Tips & Tricks

One of the most important things to decide early on is where you're going to install the DVR. There are several considerations to make, and some of them conflict with one another.

- Your DVR needs to be located in a central location to allow you maximum options when placing your cameras. This is true whether your cameras are connected via cables or wirelessly - one way, you'll have to physically install cabling, and wireless systems still have a limited range.
- On the other hand, your DVR should be installed somewhere secure. If the DVR is too accessible it could be sabotaged or removed by an intruder.
- Ideally, assuming that you wish to use most features this DVR offers, it should be installed close to a network access point. There is, however, no problem using a long network cable - a Cat 5e Ethernet cable up to approximately three hundred feet (about 90m) should work. Different network cable standards will offer a longer or shorter range.

IMPORTANT: A note about operation

- We strongly recommend you use a USB mouse (one is included) for setup and operation of the DVR.
- Your DVR is like a small, keyboardless computer and like most computers, the fastest and easiest method for navigating through the menus and their various options is with the mouse.
- Your remote control is ideal for those times your DVR is out of arms reach.

Package Contents

- DVR Unit
- Remote Control
- Operating Instructions
- Power Adapter with Cable
- Software CD
- Network cable
- USB Mouse
- Security Stickers (4 Pack)

If you are missing any of these components, contact Swann Communications for assistance.

Important Information

IMPORTANT GUIDELINES

- **Do not expose the DVR to moisture.** Water is the arch-enemy of electrical components and also poses a high risk of electric shock.
- **Avoid dusty locations.** Dust has a tendency to build up inside the DVR case, leading to a high risk of failure or even fire.
- **Only install the DVR in a well ventilated space.** The circuitry and hard drive in the DVR produces a significant amount of heat, and this heat needs a way out.
- **Do not open the DVR case except to install/swap the hard drive inside.** There are no user serviceable parts inside.
- **Never open the case whilst the DVR is plugged in,** and never turn the DVR on whilst the case is open.
- **Use only the supplied power adapter.** Other adapters may cause damage to the DVR or cause a fire.
- **Do not cut or modify any cable for any reason.** Doing so will void your warranty, as well as pose a great risk of fire or electrical shock.
- **Do not expose the DVR to sudden bumps or shocks** (for example, being dropped). The DVR is as robust as possible, but many of the internal components are quite fragile.
- Remember that the DVR is, in all likelihood, going to be left on **24 hours a day, 7 days a week**. Keep this in mind when choosing a location for installation.

Default Password Information

To ensure your privacy, this DVR supports password protection.

USERNAME: The default, all-access username is "**admin**". If the DVR asks you to log in before you've set a password, enter **admin** as your username and leave the password blank. This will give you access to all areas of the DVR.

PASSWORD: There is no "default" password - until you set a password and enable password protection, the DVR will not ask you for one.

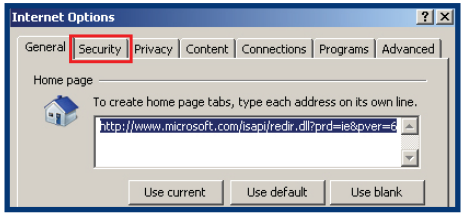
To ensure your ongoing privacy, **we strongly recommend setting a password as soon as possible**. Choose something that you'll remember, but that others would be unlikely to guess.

If you do manage to lock yourself out of the DVR, you'll need to contact us at the Swann Technical Support Telephone Helpdesk - the number is on the back cover.

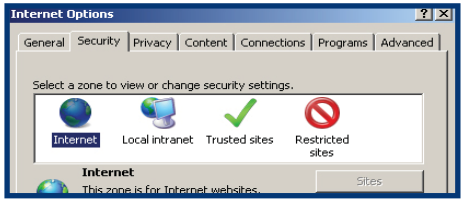
Adjusting the Security Settings in Internet Explorer

1. Open **Internet Explorer**.
2. Click **Tools** --> **Internet Options.**

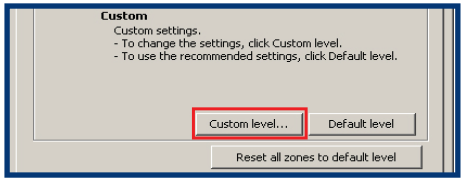
3. In **Internet Options** click on the **Security** tab at the top.


Internet Options
General Security Privacy Content Connections Programs Advanced
Home page
To create home page tabs, type each address on its own line.
http://www.microsoft.com/isapi/redir.dll?prd=ie&pver=6
Use current Use default Use blank

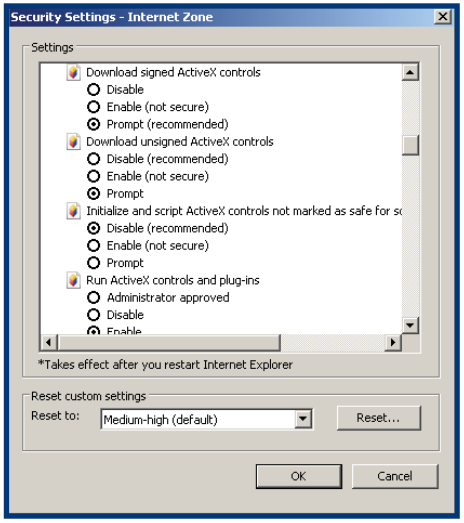
4. Select the **Internet** zone option.



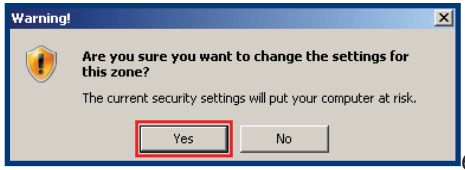
5. Click on the **Custom level** button.


Custom
Custom settings.
- To change the settings, click Custom level.
- To use the recommended settings, click Default level.
Custom level...
Default level
Reset all zones to default level

6. You will now see the list below (or similar, depending on the version of IE you are running).



7. Set **Download signed ActiveX controls** to **Prompt**.
8. Set **Download unsigned ActiveX controls** to **Prompt**.
9. Set **Initialize and script ActiveX controls not marked as safe for scripting** to **Prompt**.
10. Set **Run ActiveX controls and plug-ins** to **Enabled**.
11. Set **Script ActiveX controls marked safe for scripting** to **Enabled**.
12. After you have made these changes, click **Okay**.
13. You will be asked to confirm your changes. Choose **Yes**.


Warning!
Are you sure you want to change the settings for this zone?
The current security settings will put your computer at risk.
Yes
No

Remote Access via Internet Explorer

The easiest way to access your DVR remotely is via an Internet browser. These instructions will detail how to access the DVR via Microsoft Internet Explorer®. This section assumes that you've already configured the DVR and your network to operate properly. Remotely accessing the DVR via Internet Explorer (IE) is a great way to test if your network is functioning as it should.

At the time of writing, the DVR supports up to 3 users accessing the DVR remotely at a time.

Note: You may have to alter and configure the ActiveX controls in IE to allow unrestricted access to the DVR. Access might be slowed or blocked completely by IE's built-in security functions. The instructions on how to do this are covered on the next page.

To access the DVR remotely via Internet Explorer:

1. Open an Internet Explorer window. If you do not have Internet Explorer you can download it from the Microsoft website (www.microsoft.com).
2. In the address bar type "http://" followed by your public IP address, a colon then your web port. For example, if your web port is "85" and your public IP address is "210.9.10.115", then you'll need to enter the information, shown on the image, immediately below these words

.

   You will now see a login window. Here, enter your password. If no password is set, leave this dialog box blank.
3. You should now have access to the DVR.

Layout of the Rear Panel

1) CH1 ~ CH8 (Video Inputs): These are the eight camera inputs, labelled as per their channel in the DVR's interface. Thus, plug the camera you want to be associated with Channel 1 into the port marked CH1 and so on.

2) Video Outputs: This sends a composite video signal out of the DVR. Each of the two ports can be connected to separate monitors. The output marked MAIN will show the main DVR interface (all channels accessible plus menus, unless you've configured the DVR to use the VGA as the main output).

3) Audio Inputs (CH1 ~ CH4): Four labelled audio inputs. These will accept standard line-level signals (<1V) and can be assigned to channels later.

4) Audio Output: Two mono audio output channels. These output a standard 'line-level' signal, and can easily be connected to the audio inputs on a television or stand-alone audio device.

5) VGA Output: For connection to a VGA monitor. This will display the same image as the MAIN video output at a selectable resolution between 800 x 600, to a maximum of 1440 x 900.

6 Above) USB Mouse Port: For connecting the included USB mouse (other standard USB mice will also work). This port will not accept a USB flash drive – this port will work with a mouse only.

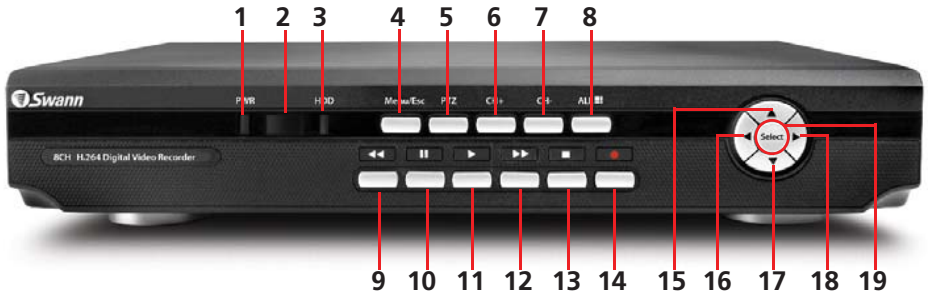
6 Below) USB Backup Port: For connecting a USB flash drive for the purposes of backing up footage.

7) RS485 Connections: This is the serial communication port, used primarily to connect PTZ (pan, tilt, zoom) devices.

8) Power Connection: For supplying power to the DVR. Use only the supplied power adaptor, and do NOT change or modify it in any way. Modifications to your power supply radically increases the risk of electrocution or fire, and will immediately void your warranty.

9) LAN Port: To connect an Ethernet cable, allowing the DVR to be connected to a local area network. This network, in turn, can be used to give the DVR a connection to the Internet.

Layout of the DVR4-2600



1) Power Indicator: This LED is illuminated when the DVR is connected to power and switched on.

2) Infrared Sensor: Monitors signals coming from the infrared remote control. If this sensor is blocked or obstructed, then the functionality of the remote will be impaired.

3) Hard Drive Indicator: Lights up when the hard drive is active. It will flash rapidly when recording or searching (in time with the read/write cycles).

4) Menu/ESC: One of the primary controls for navigating through the menus. When in live-viewing mode, it will enter the main menu. When pressed in the main menu, it will return the DVR to live-viewing mode. Finally, when in a submenu, this button will return you to the main menu.

5) PTZ: Opens the Pan, Tilt, Zoom pop-up menu. This is used to control PTZ capable camera systems, and will not affect standard cameras.

6) CH+: Moves "up" one channel.

7) CH-: As 6, but descends one channel.

8) Display (All) Mode: Enters split-screen multi-view. The whole screen is split into four or nine sections, each displaying the images from one camera. Press multiple times to cycle through all available viewing modes.

9) Rewind: During playback, this will reverse the footage. Press multiple times to increase the speed of the reversing. When navigating through menus, this button will move the cursor to the left.

Static and Dynamic IP Addresses

In much the same way as your home network can use static or dynamic IP addresses, many Internet providers don't issue (or charge more for) a static IP address for users. The easiest way to find out is to contact your Internet service provider. Alternately, you can access the www.whatismyip.com service, make a note of your IP, then reboot your router/gateway. This should refresh your Internet connection. If your IP address stays the same, you've probably got a static IP address. If it changes, you have a dynamic IP address.

How do I deal with a dynamic IP address?

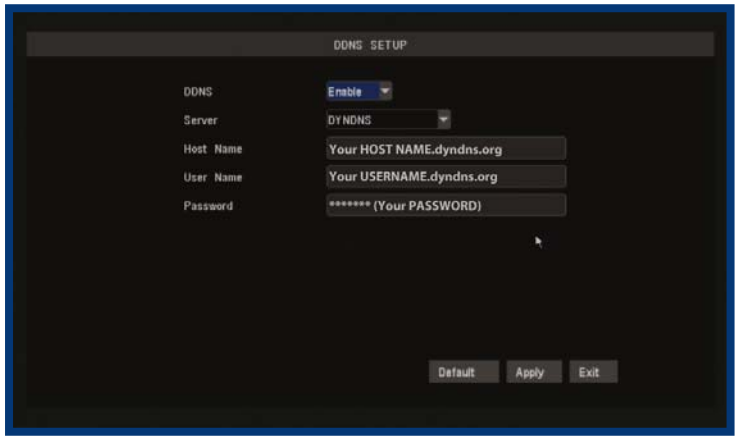
One option is to contact your ISP and request a static IP address. They'll usually charge a small fee for doing this. It's worth noting that not all ISPs offer static IP addresses.

If your ISP does not offer static IP addresses then you can use a dynamic referencing service, like www.dyndns.com. They offer a free service which will give you a text address (such as www.exampleipaddress.example) which will take you directly to your public IP address. For this service to work correctly, you'll need to set up the DVR to work with DDNS.

Server: Choose the server that you're using. There are two options, DYNDNS (www.dyndns.com) and 3322 (www.3322.org). We suggest DYNDNS, unless you are fluent at reading Chinese.

Host Name: Enter the host name that you set up in your DDNS service. This is the address you use to access your network.

Username and Password: Here, enter the username and password you setup with your DDNS server. These do not have to match your username/password combination in either your DVR or router (for the sake of security, we suggest making them different).



Remote Access: IP addresses

Public and Private IP Addresses

The IP address used by the DVR, whether entered manually (STATIC) or assigned by the dynamic host (DHCP) is the private IP address of the DVR. The private IP address is used to locate the DVR on your private network. However, to access the DVR from a remote location via the Internet, you'll need to know your home network's public IP address.

What's the difference?

The IP addressing system that the Internet utilizes at the moment supports up to (approximately) 4 billion addresses. That is a lot, but it's not enough for every device connected to it (computers, phones, video game consoles, DVRs, servers, televisions and even some refrigerators can all have Internet connections) to have individual addresses. This problem is solved by assigning an address to each sub-network on the Internet. This means that all LANs, such as your local network in your home or office, will have a public IP address which will allow you to find that network from anywhere connected to the Internet.

This means that all devices connected to your network share one public IP address. To differentiate devices on your network, your network has its own IP address range, and this is what is referred to as your private IP address. You'll need to know the private IP address if you're using STATIC addressing and/or are Port Forwarding (i.e. **not** using UPnP).

If you're using DHCP addressing and have UPnP enabled on both the router and the DVR, then you may not need to know the private IP address at all.

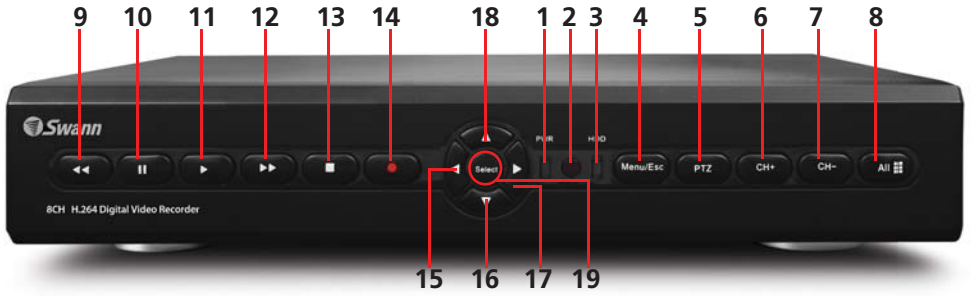
How do I find these addresses, and what should I do with them?

If you're setting up a dynamic network (DHCP) then you don't need to know the private IP address of your DVR (it'll probably change over time, anyway). Rather, you only need to define the Media Port and Web Port. If you're not using UPnP (if possible, use UPnP - it's just awesome) then configure your router to forward these ports to the DVR.

If you've configured your network using STATIC IP addressing, then you'll be entering the private IP address directly into the DVR. Then you'll need to choose your Web Port and Media Port. Finally, you'll have to configure your router to forward your selected ports to the private IP address of the DVR.

Finally, to learn your network's public IP address, you'll need a computer with Internet access connected via the same network as the DVR you're configuring. Then, open an Internet browser window. In the address bar, go to www.whatismyip.com. Your public IP address will be displayed instantly!

Layout of the DVR4-2550



10) Pause: During playback, will pause the current recording and leave a still-frame on screen. In live-viewing mode, this will activate the auto-sequence mode, where the display automatically cycles through the available camera signals (this must be correctly configured and enabled to function correctly).

11) Play: If pressed in live-viewing mode, this will take you directly into playback mode, and begin playing the most recent recording. In playback mode, use it to resume playback after pausing or stopping a recording.

12) Fast-Forward: During playback, this will speed up the footage. Press multiple times to increase the speed of the playback. When navigating through menus, this button will move the cursor to the right.

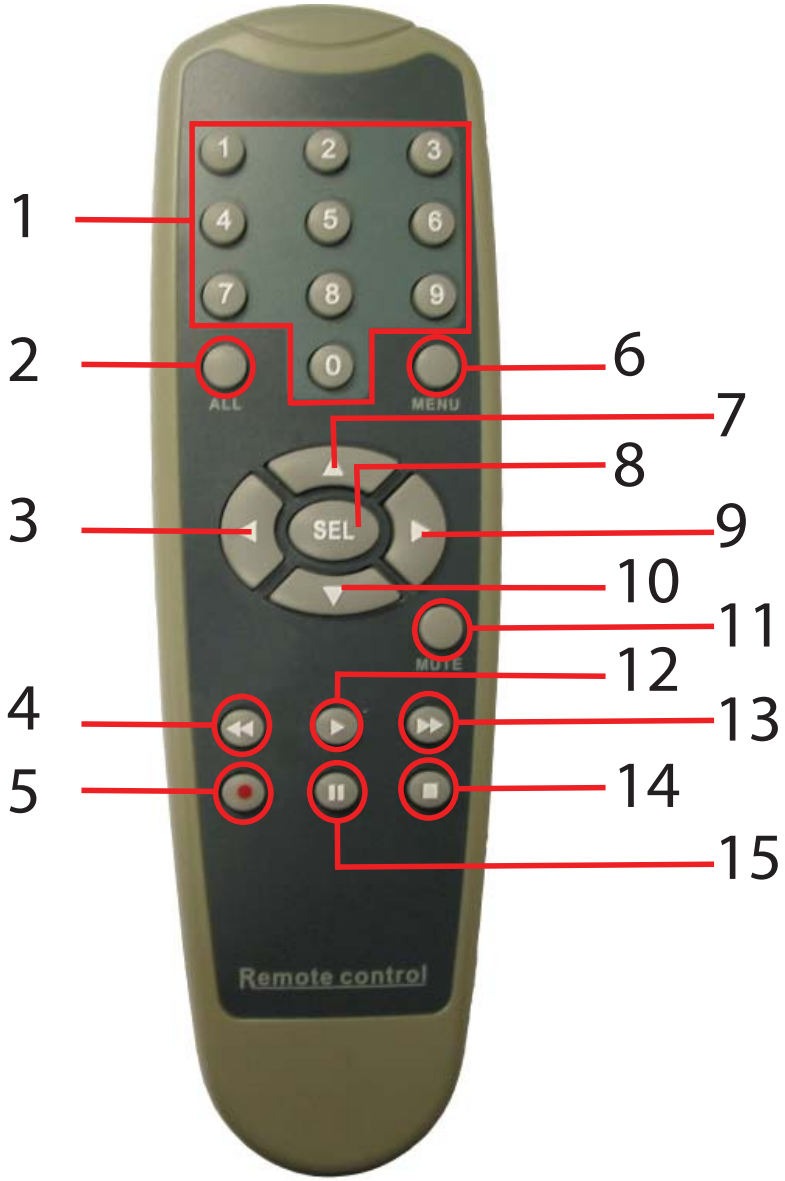
13) Stop: In playback mode, pressing this button will stop playback.

14) Record: Press to immediately start recording. This acts as a manual override to the schedule and motion recording modes. For a channel to be recorded in this mode (or any other) it must listed as 'active' in the Camera Setup and Record Setup menus.

15 ~ 18) Arrows: Move the cursor in the selected direction in the menus.

19) Select: The equivalent of Enter/Return on a computer keyboard. Use this button to (as the name suggests) select an option in the menus, or to confirm an entry.

Layout of the Remote Control



Remote Access: Ports and UPnP

UPnP

Basically, UPnP is the ultimate shortcut when setting up your home network. The big benefit of UPnP is that you don't have to worry about port forwarding, which is one of the most time consuming and difficult stages of configuring your network.

The requirements for UPnP are: A UPnP capable router, with UPnP enabled.

Enabling UPnP

UPnP is a setting which can be enabled on certain routers. You'll have to see your router's documentation for instructions on how to enable UPnP, if your router supports it.

Enabling UPnP will have a minor effect on your network security. If your network is free from malware (such as viruses, spyware, adware and so on) then UPnP will improve the security of your network. This happens because the ports that programs and devices use while they're open are automatically closed when the program is closed or the device shut down. On the other hand, if UPnP is enabled once the security of your network is already compromised (that is, a device or computer on the network is infected by some kind of malware) then UPnP will reduce your networks ability to quarantine suspect programs by allowing them outbound access through the router's firewall. Basically, if you're planning to use UPnP, be sure your computers are clean and free from malware!

Port Configuration

The DVR needs three ports to be available and properly configured to work correctly over the Internet - the **Web Port**, the **Media Port** and (if you're planning to access the DVR via a mobile device) the **Mobile Port**.

If you're not using UPnP (we recommend you do use UPnP) then you'll need to forward these ports.

Media Port: The default value is "**9000**".

Web Port: The default value is "**85**" - this is typically a good choice as few other devices or programs will use this port. If there is anything else on your network using this port, you may need to change it.

Mobile Port: The default value is **18004**.

Remember: If you're not using UPnP, these ports need to be forwarded from your router directly to the DVR. Without these ports forwarded properly, remote access will not work.

Remote Access

The primary requirements for accessing the DVR via the Internet are:

A High-Speed Internet Connection

Video uses a lot of data, so you'll need a fast Internet connection in order to get smooth playback and monitoring remotely. Note that upload speed refers to the rate at which an Internet connection can send data, not receive it. Most Internet connections are 'asymmetrical', which means they can download data faster than they can upload it. We think that an Internet connection with an upload speed of 256kpbs is generally sufficient for remote access, but ideally upload speeds of 512kbps or higher are recommended - particularly for multi-channel playback or monitoring at higher resolutions and quality settings.

Your DVR & Local Network Correctly Configured

It is important that your local network function correctly, and that the information entered into the Networking menu in the DVR (see ***"Network Menu" on page 30***) matches the general network settings.

The first thing you'll need to determine is whether your router requires devices to use fixed (STATIC) or dynamic (DHCP) addressing. Some routers can use either method, whilst some only support DHCP, and others only support STATIC. If your router supports it, we recommend using DHCP addressing with UPnP enabled, as it makes locating the DVR from other devices on your network easier.

In a DHCP configuration, you do not need to enter the IP address, subnet mask or default gateway values into the DVR - the router will automatically assign these.

For a STATIC configuration, the DVR needs to be told what IP address to use (this must be unique) and the subnet mask, gateway address and DNS server address (these must match the other devices on your network). The most common way of discovering these values is to use a computer already connected to the network, which can access the Internet.

1) 0 ~ 9 (Numeric Buttons): Used to input numbers. 1 ~ 4 can be used as quick channel changing buttons in a similar manner to a television, and these will work during either live-viewing mode or playback. Additionally, the numeric buttons will be used when inputting any numerical information – most often, your password.

2) ALL: Activates or deactivates the entire area shown on screen to be armed for Motion Detection recording mode. Motion Detection will need to be correctly configured for this button to function as described.

3, 7, 9 & 10) Arrow Buttons: Moves the cursor in the appropriate direction when navigating menus.

4) Rewind: During playback, this will reverse the footage. Press multiple times to increase the speed of the reversing.

5) Record: Press to immediately start recording. This acts as a manual override to the schedule and motion recording modes. For a channel to be recorded in this mode (or any other) it must listed as 'active' in the Camera Setup and Record Setup menus.

6) Menu: One of the primary controls for navigating through the menus. When in live-viewing mode, it will enter the main menu. When pressed in the main menu, it will return the DVR to live-viewing mode. Finally, when in a submenu, this button will return you to the main menu.

8) SEL (Select): The SELECT button is the equivalent of Enter/Return on a computer keyboard. Use this button to (as the name suggests) select an option in the menus, or to confirm an entry.

11) Mute: Enables or disables the audio output. This won't have any effect on recordings - if you've configured the DVR to record audio, then it will continue to do so while muted - you just won't hear it until you un-mute it!

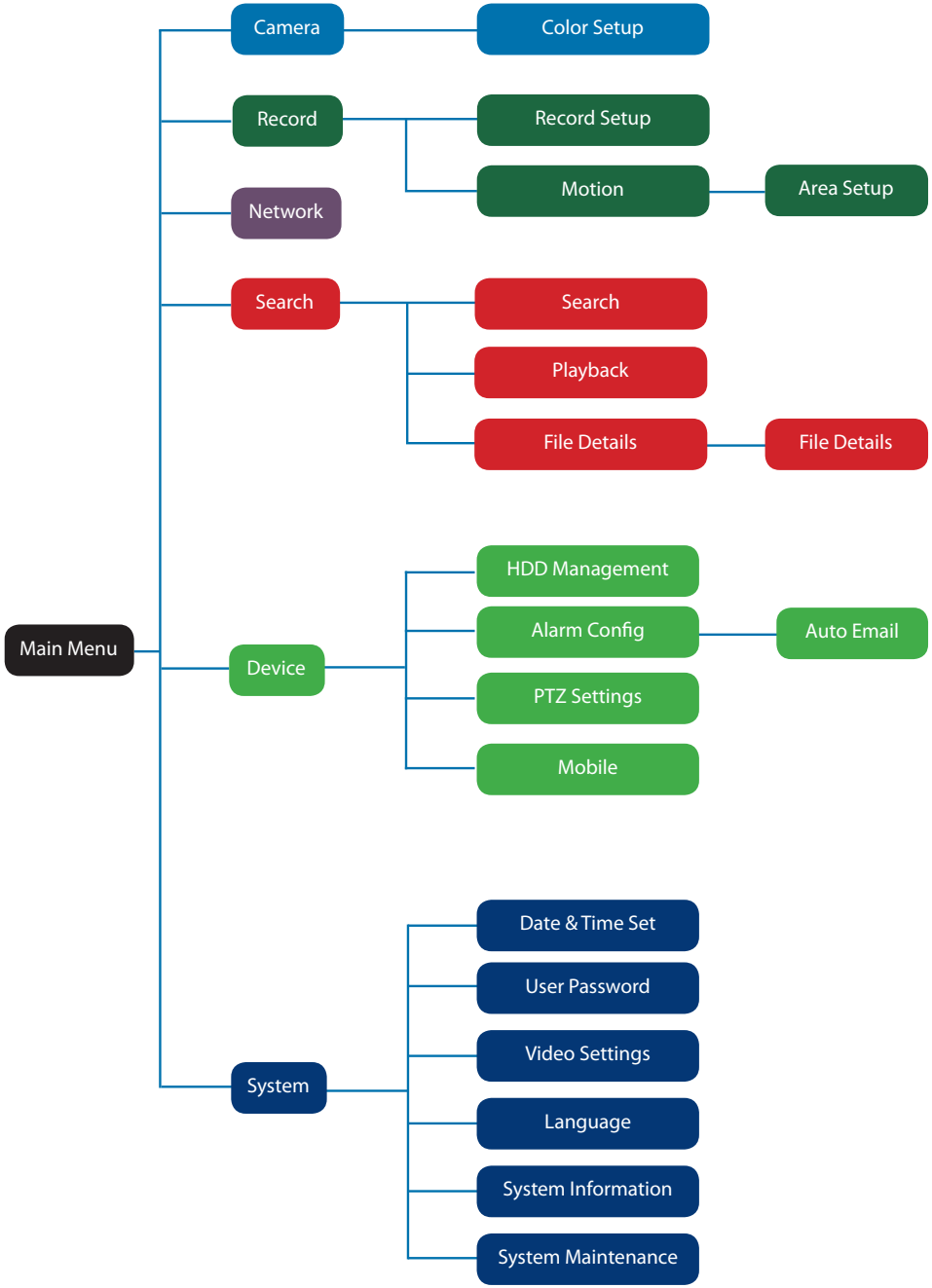
12) Play: If pressed in live-viewing mode, this will take you directly into playback mode, and begin playing the most recent recording. In playback mode, use it to resume playback after pausing or stopping a recording.

13) Fast-Forward: During playback, this will increase the speed of playback. Press multiple times to increase the speed of playback further.

14) Stop: In playback mode, pressing this button will stop playback.

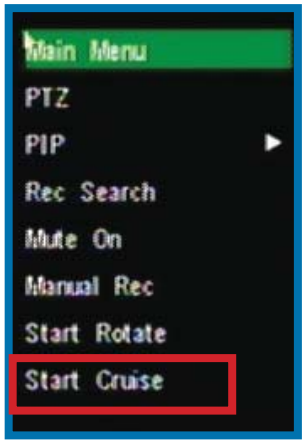
15) Pause: During playback, will pause the current recording and leave a still-frame on screen. In live-viewing mode, this will activate the auto-sequence mode, where the display automatically cycles through the available camera signals (this must be correctly configured and enabled to function correctly).

Navigating the Menus



9. **SELECTED PRESET POINT:** The current preset point being defined/edited.
10. **STOP TIME:** How long the camera will pause at each preset point when using CRUISE MODE.
11. **GOTO:** Moves the camera to the selected preset point.
12. **DEFINE:** Saves the current position of the camera as a preset point.
13. **ERASE:** Deletes the selected preset point.
14. **SAVE:** Saves changes.
15. **EXIT:** Leaves the PTZ SETUP menu.

Setting up Cruise Mode



To setup CRUISE MODE, you'll need to define "POINTS" for each channel with a PTZ camera you want to "cruise". A POINT is one place that the camera needs to move to on its loop.

- Move the camera to the desired position using the arrows.
- Hit the button.
- The point will be saved. Its name will be one digit higher than the previous point.
- For easy cruise setup, define your points in the same order as you want the camera to move through them.

The button will take the camera back to a pre-defined point. The button will remove all your defined points.
When you've set your points, select then .

- To start cruise mode, select START CRUISE from the pop-up menu.
- To stop cruise mode, select STOP CRUISE from the same menu.

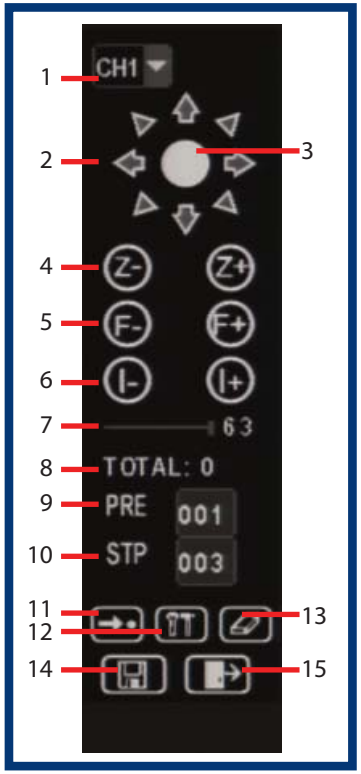
Remember: Before Cruise Mode will work, you'll need to have enabled the PTZ Configuration menu. See ***page 46***.

PTZ Controls

You can bring up the PTZ Control window by pressing the PTZ button on the remote control, or by right-clicking the mouse in the live view mode, and choosing PTZ. The PTZ control window is not available while **Cruise Mode** is active.

Note: the features which will be usable depend on the capabilities and limitations of your PTZ system.

Here, you'll be able to aim the camera, as well as alter aspects of the lens and iris configuration. We'll explain a little more about what each of these does:



1. **CHANNEL SELECTION:** Select which channel's PTZ device you wish to control. Depending on your PTZ Configuration settings, this may or may not be the same as the PTZ Command Address.
2. **ARROW BUTTONS:** Used to manually move the camera. The arrow buttons will move the camera in the selected direction, and the centre button toggles Auto-Scan ON and OFF.
3. **HOME:** The HOME button will send the camera back to its default starting position.
4. **ZOOM:** If you are using a variable zoom PTZ camera, you can zoom in or out here. Zooming in will increase the size of objects in view, at the expense of reducing the field of view. You may need to adjust focus when using the ZOOM function.
5. **FOCUS:** Adjusts the focal plane of the lens. If an image is blurry, try adjusting the focus. To best set the focus, move one direction until things become clear, and then blurry again. Move back and forth until you find sharp focus.
6. **IRIS:** Controls how much light gets into the camera. If things look too bright (or white) lower the IRIS value. If things are too dark (or black) raise the IRIS value. Many cameras do this automatically.
7. **SPEED ADJUSTMENT:** By selecting this with the mouse or the arrow buttons, you are able to change the speed at which your camera will tilt, pan and zoom. The higher the number, the faster the camera will move.
8. **PRESET POINT COUNT:** The total number of preset points currently defined.

There are two main ways to navigate through the menus on the DVR. One is to use the included USB mouse. This is the fastest and easiest way to navigate through the menus, make selections and input information. We highly recommend using the mouse to operate your DVR.

The other way is to use the buttons on the remote control. This is ideal for times when your DVR is not within reach or you only want to perform basic functions.

USB Mouse

When a USB mouse is attached to the DVR, it allows for easy navigation and operation of the menus. In this capacity, the mouse functions in a very similar manner to the mouse attached to a computer. The left mouse button is used to select, confirm choices and otherwise interact with the menu system. The right mouse button opens the pop-up menu (when pressed in live-viewing mode) or exits a menu (when pressed whilst in the menu system).

Remote Control

For an explanation of the functions of the buttons on the remote control, see ***"Layout of the Remote Control" on page 10***. Many of the controls operate in a similar manner to controls on a DVD player or similar. However, due to the specific and multi-channel nature of the DVR, the functionality of some buttons may not be immediately obvious.

IMPORTANT:

The DVR displays the menu on only one output at a time. If the DVR is not displaying the menu on the screen you have connected, **press the 0 key on the remote control** to swap displays.

Navigating the Menus

IMPORTANT - Remembering to Apply Your Changes

When you're using the menus to change settings or values, you should click "**Apply**" in the bottom right corner to save your changes.

If you do not click "**Apply**," a window will pop up asking whether you want to save your changes. Choose "**OK**" to save the changes or choose "**CANCEL**" to discard them.

Always select the APPLY button before leaving a menu or OK from the Save Changes dialog window upon exit if you want to save the changes that you have made.

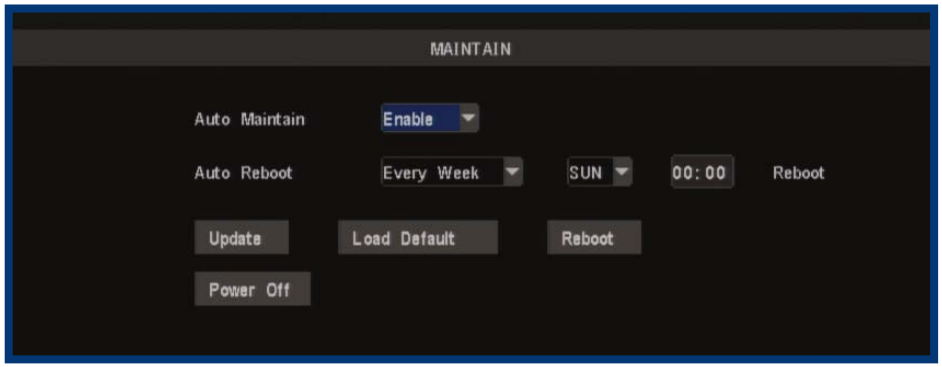
There are two reasons why any changes to your settings must be confirmed. For one, it helps prevent accidental modification of the DVR's settings while you're navigating other menus or similar. Secondly, the DVR only checks and loads the settings you've modified when the apply button is pressed or you confirm the change upon exit. This is important to prevent the DVR operating erratically or performing an unintended operation whilst settings are in the process of being modified.

Note that the ***"Date and Time Menu" on page 52*** will **not** ask you to confirm your changes. This is to prevent an incorrect time accidentally being selected, as this can have major consequences.

Using the On-Screen Keyboard

As the DVR doesn't have a keyboard, when you have to enter text the DVR will present you an on-screen 'keyboard'. This will automatically appear when you select a text field which allows you to enter a value.

Maintain (System Maintenance) Menu



AUTO MAINTAIN: When set to DISABLE, there won't be any other options available on this screen. Choose ENABLE if you want to set the AUTO REBOOT function.

AUTO REBOOT: Will automatically shut the DVR down and restart it at a certain time of the day, week or month.

- Note that, if you chose monthly rebooting and you enter the 31st as the date you'd like the DVR to reboot, there are several months of the year that don't have a 31st day. It is suggested that this date be avoided, for that reason.
- To maintain the operational integrity of the DVR, it is suggested that it be rebooted periodically. In much the same way that a computer can become unstable if left on for an extremely long time, the DVR can become unstable. It is strongly suggested that the DVR be rebooted at least once per month. However, as this can be a hassle (particularly if the DVR is stashed away somewhere inconvenient) you can set the DVR up to reboot itself.

When the DVR is rebooted, no settings will be lost, and it will automatically resume its recording mode and schedule without alteration.

UPDATE: For loading new soft/firmware onto the DVR via a USB flash drive. Usually, you won't need to use this setting unless directed to do so by Swann Technical Support.

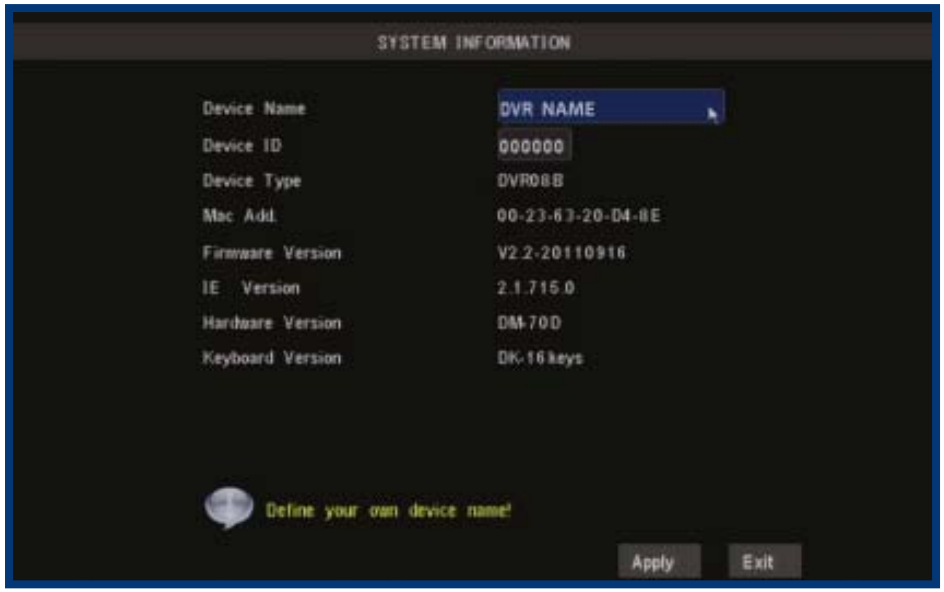
LOAD DEFAULT: Returns the DVR to it's initial factory settings. Can be useful if, for some unknown reason, the DVR is behaving erratically. You can select specific attributes of the DVR to return to the default - for example, you could reset the Recording Options to the factory default whilst leaving your recording schedule unaffected.

REBOOT: Turns off and restarts the DVR immediately.

POWER OFF: As the DVR has no power switch, you should click on this option first if you want to power off your DVR or disconnect it from the power. This gives the DVR time to stop what it is doing and prepare to shut down properly and avoid data corruption on the hard drive. Once the DVR has completed its shutdown process, it will indicate when it is safe to unplug the power cable.

Remember: After making changes to the settings press/click the APPLY button.

System Information Menu



System Information Menu

The system information screen displays system information about the DVR.

There are two items that you can edit here.

Device Name: This will identify the DVR over a LAN or via the Internet using remote access software - the name helps you identify the DVR.

Device ID: The DEVICE ID identifies a DVR on the RS485 network it's connected to. If you're running multiple DVRs, then we recommend giving each its own, unique DEVICE ID number. This ID must be unique and not shared by other devices such as PTZ cameras.

Device Type: The device type description.

MAC Addr: The Media Access Control (MAC) address.

Firmware Vers.: This is the version number of the firmware or software for the DVR.

IE Version: The version of the Internet Explorer plugin.

Hardware Vers.: This is the version number of the hardware.

Keyboard Vers.: This is the version number of the on-screen keyboard.

Remember: After making changes to the settings press/click the APPLY button.

Getting Started

If you've just unpacked your DVR and are not sure where to begin setting up your system, here's a quick rundown of the most important things that need to be set up.

- **Test your system.** Before installing cables into walls, it's a great idea to plug everything in and make sure it all works. This is particularly true if you're using additional cameras to any that came with the DVR (this DVR is available stand-alone or in a kit with cameras). We do our very best to ensure that the equipment reaching you is of the highest quality and will work out of the box, but accidents do occur in shipping and sometimes components can fail. Better to find out now than once everything is screwed in place!
- Then, once the DVR is on and working, the first thing to do is to **set your user access controls and passwords** (see ***"User Setup Menu" on page 54*** for details on how to do it).
- Set the **Date and Time** (see ***"Date and Time Menu" on page 52*** for details) to ensure that, once you start recording, you are able to index and search the recorded footage easily. Also, if using the DVR's footage in any legal proceedings, then having an accurate date and time on your footage becomes quite crucial.
- **Check your hardware** - specifically, and most importantly, the hard drive (see ***"HDD Management" on page 44***). This is where all your footage will be stored, so it's quite important to ensure that it is functioning correctly.
- **Setup your recording modes and/or schedule** (see ***"The Recording Schedule" on page 25***) to make sure that the DVR will record what you want it to, and at the right time.
- **OPTIONAL (Advanced Users):** Configure your network settings (see ***"Network Menu" on page 30***).

Starting the DVR

Once the DVR has been connected to power it will switch itself on automatically. The DVR takes approximately 45 seconds to boot up, during which time the image to the right will be displayed.

When you first press a button on the remote control or click a button on the mouse, the DVR may ask you to LOGIN.

To get full functionality of the DVR, enter the username **admin** and leave the password field **blank**. To change the **admin** password, alter user priviledges or change whether the DVR requires a secure login or not, see ***"User Setup Menu" on page 54***.

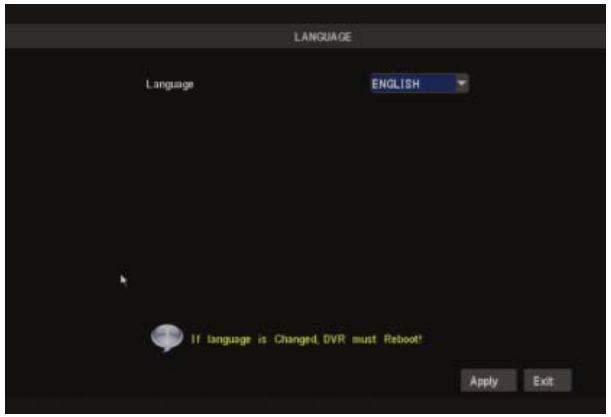
The default mode of the DVR is live-viewing mode. This is the mode which monitors the images coming from your cameras in real-time, and allows you to configure your recording and channel options. The DVR automatically starts in live-viewing mode, with multi-view enabled.

The first thing you'll probably open is the pop-up menu. To access the pop-up context menu, right-click anywhere on the live-viewing screen, or press the MENU / ESC button on the remote control. The pop-up menu lets you quickly access the following functions, which can be selected by left-clicking the option you want. The options are described in detail on the following page.

Language Menu

Language Menu

- Using the mouse or the arrow buttons, select the drop-down menu of languages.
- Choose the language that best suits your needs.
- Confirm your choice by pressing select or left clicking the option.



A note on languages

Unless you really want to change the language of the DVR menus, stay away from this setting. Having the menus in a foreign language can make it difficult to get back to the menu to put the setting back to the right one!

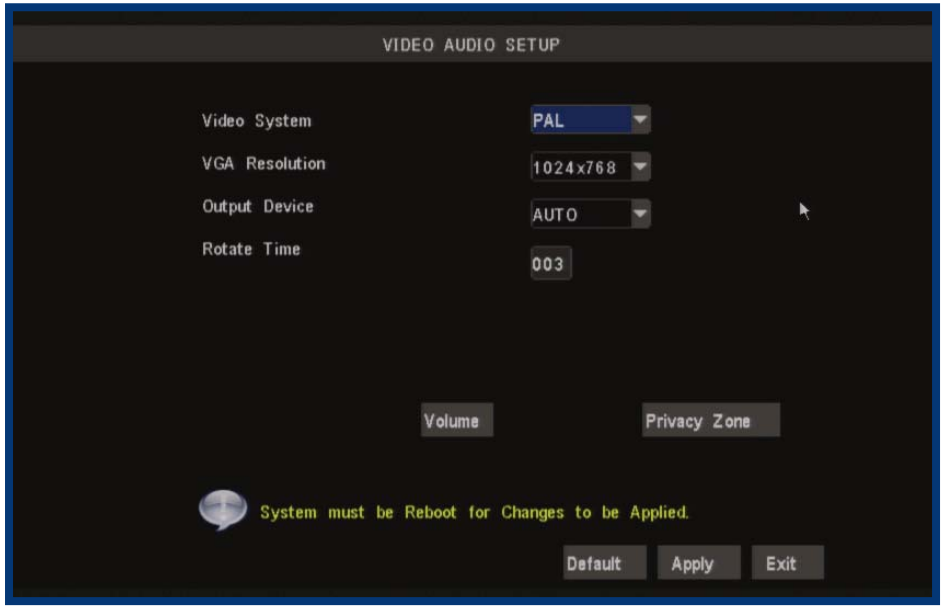
Having said that, if you do change it by mistake (or the DVR is in a non-native language when you get it) in the main menu, select the icon in the bottom right, then in the SYSTEM menu, LANGUAGES is the icon in the bottom left. That will bring you to the drop down menu where you can change languages.

Output Device Shortcuts

You can quickly swap the Output Device setting without the hassle of opening the **Video / Audio Setup Menu** by **pressing the "0" (zero) key on the remote control.**

Remember: After making changes to the settings press/click the APPLY button.

Video / Audio Setup Menu



Video System: Here you can choose between PAL and NTSC. PAL is used in Western Europe and Australia, NTSC is used in the US, Canada and Japan. If the DVR's picture is black and white, flickering or similar, then this is probably caused by the video system being set incorrectly.

VGA Resolution: This setting will determine how detailed the image sent to a VGA compatible monitor (connected via the VGA port on the rear of the DVR) will be. The term VGA is somewhat of an anachronism, referring to the plug-type, not to the actual resolution. The DVR can be set to four different resolutions: SVGA (800 x 600), XGA (1024 x 768), SXGA (1280 x 1024) and 1440 x 900 (a resolution which doesn't have a short three-or-four-letter "name"). SVGA and XGA are standard 4:3 monitors. SXGA monitors are 5:4 (slightly more square). 1440 x 900 is a widescreen format for 16:10 monitors.

Output Device: The primary display device you want to use. By default, the menus and other on-screen displays will be shown on this device, unless manually changed. The options are: VOUT, which will output to a TV via the composite video output; VGA, which will output to a PC monitor connected to the VGA port; and AUTO, which will detect which output has a screen attached and display accordingly. See Output Device shortcuts, opposite.

Rotate Time: How long channels will be displayed in Rotate mode.

Volume: Changes the audio output volume from the DVR.

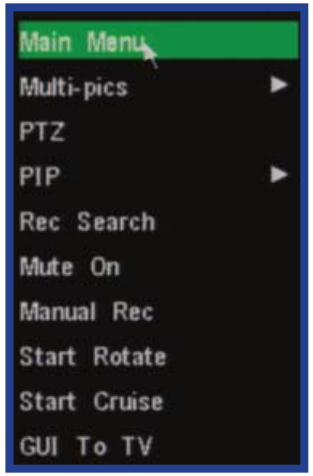
Privacy Zone: Use this to mask (read: put a black square over) certain areas of your images. You can define up to four areas of the screen to mask. These areas are defined in the same way as the motion detection area. This setting **will** affect recordings - the black mask will still be there when footage is played back!

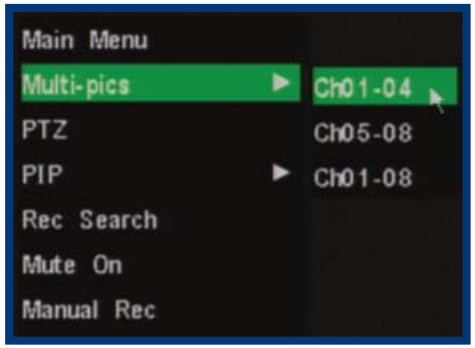
Remember: After making changes to the settings press/click the APPLY button.

Main Menu: Opens the Main Menu of the DVR. See ***page 18***.

PTZ: Opens the Pan, Tilt, Zoom controls. The same function can be accessed by pressing the PTZ button on the remote control.

Multi-pics: Select from all available ***viewing modes***, and which channels you'd like to display. You can access the same options by using the viewing modes select button.





***Left:** The **Multi-pics** options. Ch01-04 and Ch05-08 will display 2 x 2 (quad) screen images of the selected channel. Ch01-08 will display all eight channels simultaneously (3 x 3, with one blank frame).*

PIP (Picture In Picture): Accesses a list of available PIP modes. You can also access and cycle through these modes using the PIP button on the remote control.

Rec Search: Opens the Record (Video) Search menu, as detailed on ***"Record (Video) Search" on page 33***.

Mute On/Off: Turns the audio on or off.

Manual Rec: Instantly engages manual recording.

Start Rotate: Initiates the automatic display rotation. Channels will be displayed sequentially on an automatic loop. To set the rotate time, see page ***"Video / Audio Setup Menu" on page 56***. If Rotate has already been turned on, then this option will change to Stop Rotate, which will disable the rotate function.

Start Cruise: This will initiate the cruise mode for PTZ devices. You'll need to have configured your PTZ device using the PTZ Configuration menu (***page 46***) and then programmed a series of preset points (see ***"Setting up Cruise Mode" on page 61***) to use as a series of cruise movements.

Lock (only appears once a password has been set - see *"User Setup Menu" on page 54*): Locks the DVR's user interface. Unlocking the DVR requires a correct username and password combination.

Main Menu

The MAIN MENU of the DVR. In this picture, the mouse cursor is currently highlighting the DISPLAY icon.

***"Display Setup Menu" on page 20*:** The camera menu contains all the options for setting up how the DVR interfaces with and displays the images from the cameras connected to it. This is where channels are enabled or disabled in live viewing, and where the AUTOSEQ (Automatic Sequence) function can be configured.

Record Menu:

> ***"Record Setup Menu" on page 23*:** Where you can configure the recording options for the DVR. You can set channels to be armed for recording constantly or on a schedule, and set the recording resolution, quality and size. You can also enable or disable the associated audio channel. Additionally, the recording function for some or all channels can be disabled entirely.
>
> ***"About Motion Detection" on page 28*:** To configure how and where the DVR looks for motion. This can be used as (and is recommended as) the primary recording mode of the DVR.

To edit the level of access a USER account has:

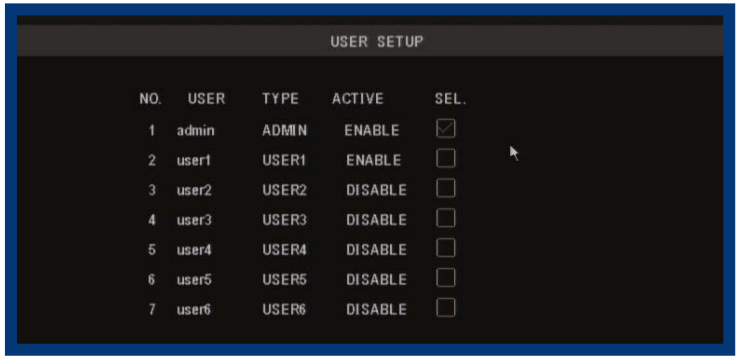
- Tick the SEL box corrosponding to the user account you want to edit.
- Click the AUTHORITY button.
- On the subsequent page, tick the boxes for the control you want that particular user account to have.
- Set a password (if you want that user account to have one).

We strongly suggest that any user account which has the power to alter the configuration of the DVR or access recorded footage should be password protected.

Note: When accessing the DVR remotely, only the *admin* account has full control of the DVR. Other user accounts with administrator access apply only for local users, not for remote access.

Remember: After making changes to the settings press/click the APPLY button.

User Setup Menu



You can define up to seven user accounts for the DVR. One of these will always be the **admin** account (though the name can be changed) which has total access to all aspects of the DVR.

The remaining six accounts are USER accounts, and can have customized levels of access.

To set a USERNAME and PASSWORD:

- Tick the SEL box corrosponding to the user account you want to edit.
- Click the EDIT button.
- Choose whether you want this user account ENABLED or not.
- Enter a USERNAME using the on-screen keyboard.
- Choose whether you want this user account to be password protected.
- If you want a password, enter it using the on-screen keyboard.
- Choose APPLY.

***"Network Menu" on page 30*:** Where you can configure the DVR to operate on your home network and over the Internet. If you want to connect to your DVR remotely using a computer or a mobile device, these settings will need to be configured correctly.

This is the most complex aspect of setting up the DVR, and requires a working knowledge of networking methods and protocols.

***"Record (Video) Search" on page 33*:** Where you look for footage of a specific event. You only need to know the date and time that the incident that you are looking for occurred. You need not know exactly - you can specify a range of times and/or dates. The DVR will list all recordings made in between the start and end points you specify.

***"Device Management" on page 43*:** Here you can find the setup and configurable options for the devices which can be connected to the DVR. These devices are in order:

> ***"HDD Management" on page 44*:** The hard drive, where you store your footage.
>
> ***"Alarm Configuration Menu" on page 47*:** The circumstances which will trigger the DVR to record or issue an alert of some kind (such as an email).
>
> ***"PTZ Menu" on page 46*:** For setting up the DVR to work with Pan, Tilt, Zoom camera systems.

"System Setup Menu" on page 51: All the remaining options and sub-menus. Here is where you set the Date and Time and your Password, change the video output settings, change languages, or the automatic maintenance schedule of the DVR.

Remember: After making changes to the settings press/click the APPLY button.

Display Setup Menu

The *Display Setup* menu of the DVR. In this picture, the mouse cursor is currently highlighting the CH1 title field.

Naming Channels

You can change the name of any channel from the default (and rather drab) "CHx" to anything that you would like (up to 8 characters in length). A descriptive name on each channel often makes it easier to remember what camera is where, and which channel would have captured an event you might be looking for.

Channel Name: The name that will be displayed over the image from a channel. Simply highlight this box and enter the new name you would like.

Position: Where the title of the channel is displayed on screen. You can choose any of the four corners of the display (U-L meaning Up-Left, and D-R meaning Down-Right).

Configuring DST (Daylight Savings Time) Settings

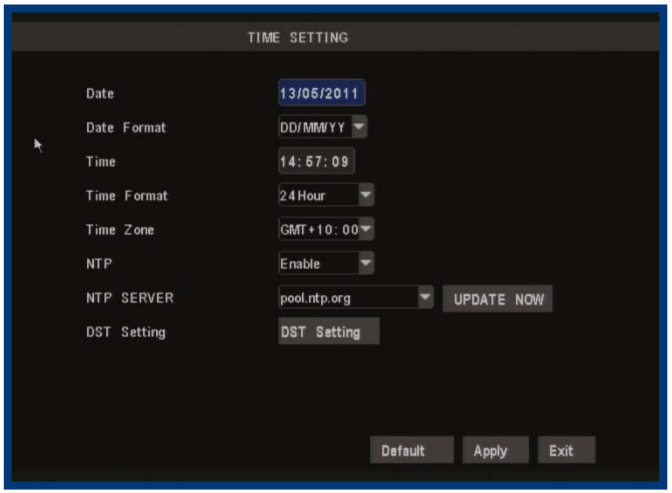
As the standards for daylight savings differ from country to country, and often state to state, you might need to manually tell the DVR exactly when it commences and ends in your locality. First, turn DST on. We suggest setting the **Daylight Saving Time Mode** to **Date**, and manually entering the dates and times that daylight savings time applies to and from, in your locality.

NOTE: Some NTP servers are NOT fully compatible with DST. This may cause your system to double-count adding one or removing one more hour than they should, or cancel each other out. You may need to intentionally change your time zone to compensate, or simply not use NTP and DST simultaneously.

Remember to APPLY your changes

Unlike other menu screens on the DVR, the *Date and Time* menu will not ask you to confirm your changes upon exit. Instead, any changes made are automatically discarded unless the APPLY button is selected.

Date and Time Menu



Setting the Date and Time

It is very important if you're planning on using the video search function that the date and time are correctly set. This is also the case if you want to be able to use the footage from your DVR in a court of law or similar legal proceeding.

Date: The date, in the format as chosen in the Date Format drop-down menu.

Date Format: The format of the date (eg. DD/MM/YYYY or MM/DD/YYYY and so on).

Time: This can be edited in the same way as the Date, or set to update automatically.

Time Format: How the time will be displayed, either as 12-hour (AM or PM) or 24-hour time.

NTP SETTING: *Network Time Protocol*. If you've got the DVR connected to the Internet, you can have it automatically sync time with an online server.

Time Zone: Particularly important if you've enabled NTP - set this to the time zone where you happen to be. For example, people in eastern Australia (Canberra, Sydney and Melbourne) choose GMT+10:00, whilst the Eastern Time zone in the USA and Canada is GMT-05:00. (GMT stands for Greenwich Mean Time - it's the baseline that keeps all the different time zones in sync.)

IMPORTANT: **If you change your Time Zone setting, click APPLY before you click UPDATE.**

Remember: After making changes to the settings press/click the APPLY button.

Color Setup

You can fine tune the look of each channel individually by adjusting the HUE, BRIGHT (brightness), CONTRAST and SATURATION values for each channel. Just select the SETUP option under the COLOR heading to open the dialog window.

This is useful if peculiar lighting conditions, a non-standard camera or a conspicuously colored object in the frame cause the display to be inconveniently tinted, or over/under exposed. Basically, this will help fix something that just doesn't look 'right'.

HUE: Changes the color mix of the image (this can have very dramatic results). It's somewhat like moving through a rainbow.

BRIGHT: Changes how light the image appears to be. However, it can't make the camera see further in the dark, or increase the clarity of an ill-lit image.

CONTRAST: Increases the difference between the blackest black and the whitest white in the image. Useful if sections of the image "grey out" but setting the contrast too high will degrade image quality.

SATURATION: Alters how much color is displayed in the image. The higher the saturation, the more bright and vivid colors will appear to be. Again, setting this too high can degrade image quality.

LIVE Viewing - Enabling and Disabling Channels

Monitoring something that you'd rather keep private/secret/unknown to the casual observer? No problems. You can alter which channels appear when in live viewing mode, and which ones appear later on.

To do so is simple: simply locate the LIVE drop down menu - it only contains two options, Enable or Disable. Simply change the value to Disable and that channel will now appear to be blank in live viewing mode. Images on the channel in question will still be recorded - and you'll see it as normal in playback mode.

Displaying the Time

In the nearby LIVE TIME and RECORD TIME drop down menus, you can select whether you want to see the time displayed on the channel in either live viewing mode or recording, respectively. The time will always be recorded in the event list and in the footage's meta-data (the information included in the file such as when it was recorded - you can access this later) - this simply changes whether or not you see it in the main view screen.

Remember: After making changes to the settings press/click the APPLY button.

Record Menu

Record Setup: The *Record Setup* menu will allow you to access and configure:

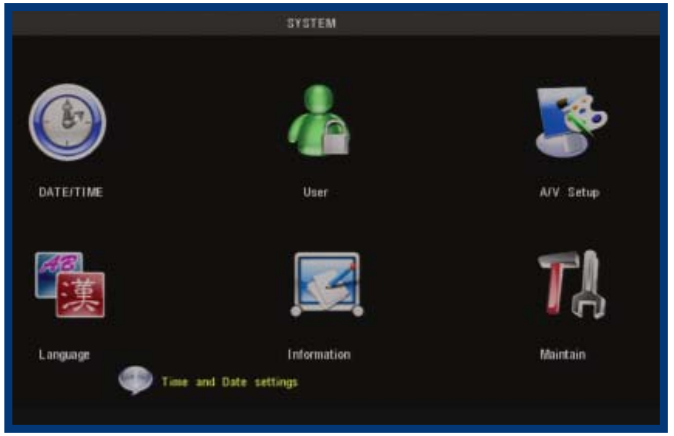
- *The Recording Schedule*, which governs when your DVR will record, and under what circumstances.
- *Quality settings:* How much data the DVR will use to record video. The higher the data rate, the more clarity there will be in your images, but the less video you'll be able to store on your hard drive.
- *Frame Rate and Resolution:* How many images per second the DVR will capture, and how large the captured images will be. This can be set to automatic (where the DVR will regulate how many frames per second are captured based on the resolution required) or manually set, channel by channel.
- *Audio Settings:* Whether the DVR will record audio (sound) or not.

Motion: Here you can configure:

- Which channels will have motion detection enabled,
- What areas of the image you want to be sensitive to motion
- The amount of motion required to trigger the motion detection feature.

Remember: After making changes to the settings press/click the APPLY button.

System Setup Menu



The SYSTEM SETUP menu is where most of the advanced settings for the DVR hide out. Most of the time, there isn't much you'll need to change here. However, a few settings might need tweaking from time to time, particularly when you're first configuring the DVR. So here's a quick rundown of what's what.

DATE/TIME: Allows you to set the date and time. The DVR will retain an accurate time even whilst turned off - there is a small battery attached to the main circuit board. It may be the case that if the DVR is switched off for an extended period (for example, weeks or months at a time) that this battery may be exhausted. In this case, you will need to setup the time and date settings again.

PASSWORD: For enabling/disabling password control to access the DVR, and choosing what this password is. The **admin** password will be the one you use for remote access (see ***"Remote Access" on page 62*** for more details).

A/V SETUP: For changing your video standard (PAL or NTSC), configuring the VGA output, selecting where the menu is displayed, and selecting how the DVR processes and outputs audio.

LANGUAGE: For changing the language of the on screen display.

INFO: Displays information about the DVR: specifically, it shows the current version of the software and hardware that the DVR is running, as well as the media access control (MAC) address.

MAINTAIN: Define and implement an automatic maintenance schedule for the DVR. It is important that the DVR be rebooted on occasion to prevent errors - this function lets you program an automatic schedule of rebooting which the DVR will follow.

Remember: After making changes to the settings press/click the APPLY button.

Email: Choose whether you want the email function enabled or disabled here.

SSL (Secure Sockets Layer): A form of security encryption often employed on the Internet. Contact your email provider to learn if they support or require SSL to be enabled. *If you're using Gmail, set this to* ***ENABLE****.*

SMTP Port: The port your email server receives data through. For the vast maority of email servers, you'll need to use port 25 - however, some exceptions to this rule exist. Again, contact your email provider if you're unsure. *For Gmail use port* ***465****.*

SMTP Server: The outgoing email server you're using. Remember that many email servers aren't compatible with the automatically generated emails that the DVR creates. *For Gmail, use* ***smtp.gmail.com***

Sender: The address the email will be sent "from". Often, you'll need to use *your username @ your server* to verify it's you (or, rather, your electronic representitive) sending the email. *For Gmail users, this will be* ***your_username@gmail.com***

Password: If your email provider requires a password to send mail from your account, enter it here. *Gmail users, this will be the same password you use to access the gmail account.*

Receiver: The email address you want the automatic emails to go to. We suggest creating a seperate email account for this, as there may be many email alerts, depending on how much motion occurs around your DVR and how long your **Interval** setting is.

Interval: How often the DVR will send auto-email alerts for subsequent events. Basically, the DVR will not send another email after an event until this time has elapsed, and will then do so once another event occurs thereafter.

TEST: Sends an email immediately, so you can check that your settings are working. If you don't receive an email, it might be that your Receiver email address has a spam filter - check the Junkmail folder, the automatically generated emails often wind up in there.

Remember: After making changes to the settings press/click the APPLY button.

Record Setup Menu

Enabling / Disabling Recording: Choose whether the channel you've selected will be recorded or not here. A channel which is "disabled" will still appear in live viewing mode, but won't be recorded. This is a "master" setting, and will override the recording schedule or manual recording modes (i.e. pressing the REC button).

Quality: The "quality" setting determines how much hard drive space the DVR will use when recording images. The higher the quality, the more detail your images will contain but you won't be able to store as much on the hard drive. A lower quality setting means more footage, but will reduce the amount of detail.

Enabling / Disabling Audio: You can choose whether the associated audio channel will be recorded. Unless you have an audio device connected that you want to record, we recommend disabling the audio as this will save a small amount of hard drive space. *Audio available on channels 1 ~ 4* ***only****.*

Pack Duration: *Pack Duration* is a measurement of how long the DVR will record for before splitting the output file into discrete units. "Packs" are something like the scene numbers on a DVD - though the video is broken up into separate units, it will still play through as one continuous movie (unless interrupted by the schedule or motion detection turning the recording on or off). If you don't want to worry about setting Pack Durations, you can leave it on the default value; it will make little difference to the day-to-day running of the DVR.

Remember: After making changes to the settings press/click the APPLY button.

Manual Frame Rate Configuration

SET FPS
MAX. Frames: 200 Fps, Remaining 0 Fps
CIF 25 CIF 25 CIF 25 CIF 25
CIF 25 CIF 25 CIF 25 CIF 25
Copy CH1 To All Copy
D1 Costs 4 Frames, HD1 Costs 2 Frames and CIF Costs 1Frames
Default Apply Exit

Frame Rate: How many frames per second (FPS) the DVR records. "Real-time" is 25 fps (PAL) or 30 fps (NTSC). However, even lower frame rates are okay - even 3fps is still the equivalent of three photographs per second.

Frame Rate - Fixed or Manual: If the FPS setting is "fixed", then the DVR will automatically adjust the frame rate to a fixed value, determined by the resolution you're recording at. The fixed framerate values will ensure there is always enough spare "frames" available. If you choose, you can manually set the frame rates for all channels. Doing so is an advanced option and only recommended for experienced users. However, it will allow you to more economically distribute the available framerate across all your channels, and use more of the available processing capability of the DVR.

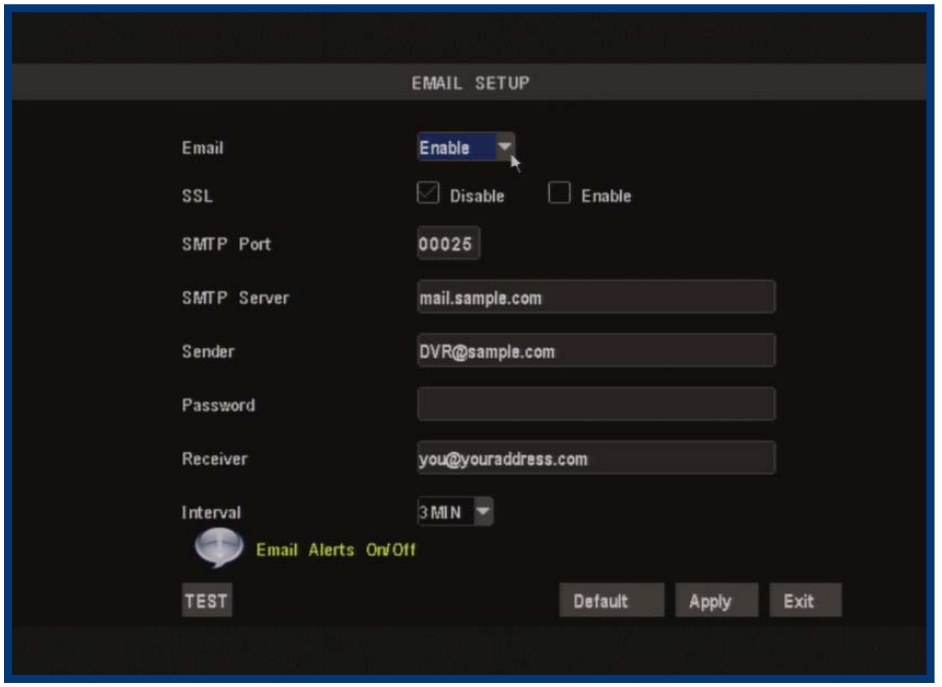
Resolution: How many little dots (called "pixels") make up your image. More pixels mean a better looking and more detailed image. However, the DVR can only process so many of pixels at once, so increasing the resolution means you'll need to lower your Frame Rate (FPS). There are four settings: *D1* (the highest - the same resolution as a DVD), *HD1* (literally "half D1") and *CIF* (one quarter of D1).

Schedule: Where you can program the DVR to record constantly or automatically (upon detecting motion or alarm events) at the times you'd like. Click or select the SCHEDULE button to program it (see ***"The Recording Schedule" on page 25***).

Copy: Quickly apply the settings you've chosen for this channel to any or all other channels.

Remember: After making changes to the settings press/click the APPLY button.

Auto Email Setup Menu



You can configure the DVR to automatically send you email alerts when it detects an alarm event.

Please note that this function is not compatible with all email servers - as the email the DVR sends is procedurally generated, many email servers misidentify it as spam. We recommend setting up a free webmail account with a compatible email provider, such as *Gmail*, which is compatible with the DVR's auto-email system.

Tips and Tricks:

- We strongly suggest testing the email setup once it is configured. This simply involves clicking the test button, located in the lower left corner of the menu.
- Some email servers may incorrectly interpret the automatically generated emails as spam. If you're not receiving the emails properly, check your "spam" or "junk" folder, or the filtering settings your email provider uses.

Remember: After making changes to the settings press/click the APPLY button.

Buzzer: Whether the internal alarm speaker inside the DVR is enabled or not. When set to OFF, the buzzer will not sound under any circumstances.

You can choose which types of alarm events will trigger the buzzer by selecting or deselecting the first tick box next to the type of alarm event you want to trigger the buzzer.

We suggest leaving the buzzer enabled, and having it sound on HDD Loss, HDD Space and Video Loss alarm events. This way, the DVR will give you a warning if its operation is compromised (either it is unable to record more footage, or there is no incoming video feed to record).

MD Alarm: Whether the DVR's Motion Detection function will trigger an alarm event. Note that this can be set independently of the Motion-based recording, which is controlled via the Schedule (***page 25***) and motion detection configuration (***page 27***) menus.

HDD Loss: Will trigger an buzzer/email if the hard drive stops functioning.

HDD Space: Will trigger an buzzer/email when the hard drive is out of space.

Video Loss: Will trigger an buzzer/email when a camera stops supplying images.

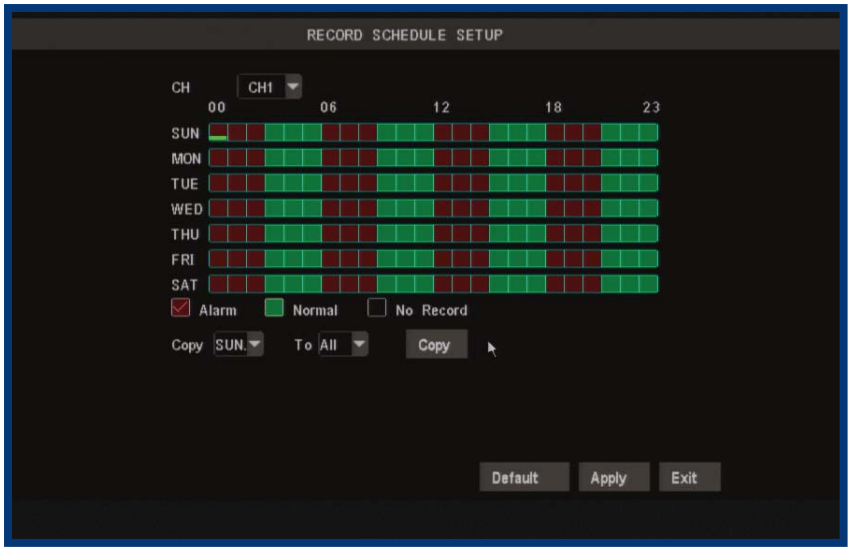
Email: See ***"Auto Email Setup Menu" on page 49***.

Post-Recording: How long the DVR will continue to record after an alarm event (such as motion) occurs.

Pre-Record: Allows the DVR to save a short amount of footage taken before an event actually occurs. This can be particularly useful for video loss alarms, as you might just catch who or what caused this alarm event!

Remember: After making changes to the settings press/click the APPLY button.

The Recording Schedule



In this example image, the CH1 will record only ALARM events between midnight and 3:00AM, CONSTANTLY between 3:00AM and 6:00AM, then continue to alternate between alarm events and constantly recording for the remainder of the day.

The DVR schedule can be set to record using three different record modes.

ALARM: Will record only when the alarm function has been triggered. This is the setting to choose if you want to record only when the DVR detects motion (recommended). By only recording when motion is detected, you'll not only save a great deal of hard drive space, you won't have to watch hours and hours of footage to locate the one incident you're interested in.

NORMAL: Will record constantly for the duration specified. This is a great way to make sure you don't miss anything in the short term, but will use up your hard drive space faster than you can say "record everything".

Of course, there are some times that recording everything is necessary - when you're using a PTZ system in cruise mode, for example.

Be aware that when you are constantly recording all eight channels, the DVR will only be able to record for a few days to weeks at a time (depending on the quality, framerate and resolution settings you've chosen) before it will have to start overwriting old events (assuming you have **Overwrite** enabled) or stop recording altogether.

Remember: After making changes to the settings press/click the APPLY button.

NO RECORD: As the name suggests, the DVR will not record anything from this channel while NO RECORD is selected. We suggest only using this setting if you're absolutely sure you don't want to see what's going on during these times.

Setting the Schedule

The first step in setting the schedule is choosing which channel you'd like to set the schedule for. From the **CH** drop-down menu, select the channel you'd like to set the schedule for.

If you'd like to set the schedule for more than one channel at a time, you have two options. One option is to manually enter the same information for each channel individually.

The other option is to choose **ALL** from the **CH** drop down menu. Selecting this will apply the settings in the schedule to all channels on the DVR. If you want to set a base schedule for all channels, and then configure them individually, select **ALL**, set your basic schedule, and then fine tune channels one at a time. Changing the **ALL** schedule will overwrite any schedule already set for individual channels.

Copying and Pasting Schedules from day to day

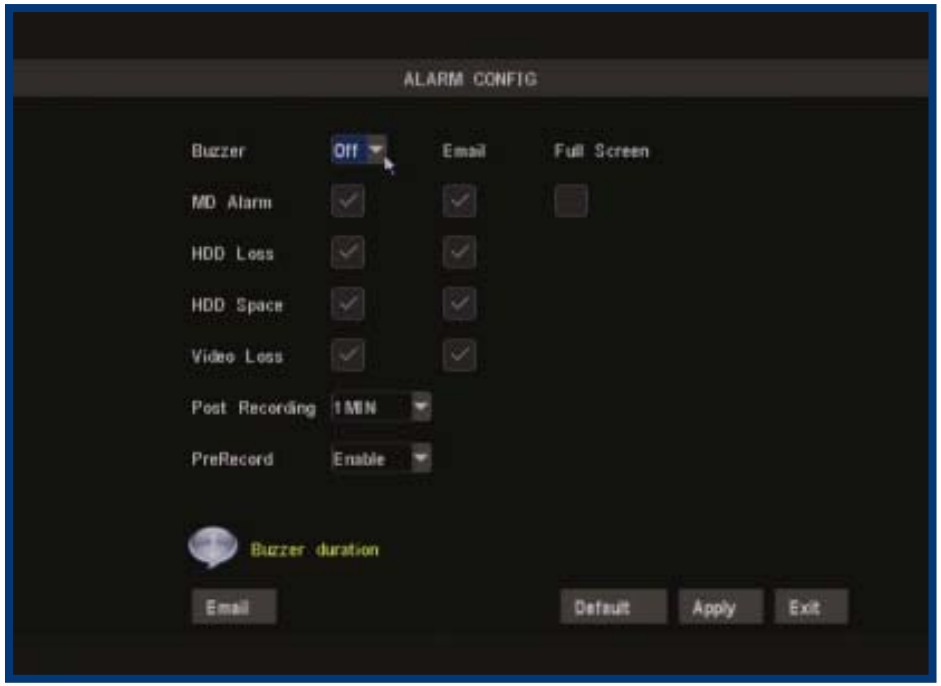
Rather then enter the same schedule information multiple times for each day you wish, you can use the **COPY** function.

To copy the schedule settings from day to day, select the day you'd like to copy from on the first drop down menu. Then, select the day you'd like to copy the schedule to from the second. If you'd like all days to operate on the same schedule, choose ALL from the second drop-down menu.

Using the arrow buttons or the mouse, highlight the **COPY** button, and left click or press select. The schedule for the selected day will be copied to the day(s) you have selected.

Remember: After making changes to the settings press/click the APPLY button.

Alarm Configuration Menu



From this menu you can configure the DVR to emit an alarm tone from it's internal buzzer, or configure the DVR to send an 'Auto-Mail' email alert when motion is detected.

For the Auto-Mail function to work correctly, the DVR will need to be correctly configured with the details of the email servers and addresses you want to use. See *"Auto Email Setup Menu" on page 49* for more information.

Remember: After making changes to the settings press/click the APPLY button.

PTZ Menu

This is where you configure the DVR to act as the controller for a PTZ capable camera system. PTZ devices are connected via the RS485 connection on the rear of the DVR. You'll need the manufacturers documentation for your PTZ system on hand to correctly set it up. The DVR is not compatible with all PTZ systems - in these cases, you'll need a stand-alone PTZ controller.

PROTOCOL: The most important setting to configure correctly. A 'protocol' determines how the DVR communicates with the PTZ system, somewhat like a 'language'. You should set this to match the specifications given for your PTZ system. The DVR supports the Pelco-P and Pelco-D protocols.

BAUD RATE: The speed at which the DVR will send information to the PTZ system. This must be set to a compatible level with your PTZ system.

DATA BIT & STOP BIT: The amount of data sent in an individual 'packet' (data bits), and the number of bits indicating the end of one packet and the beginning of another (stop bits). Again, this should be matched to the requirements of your PTZ system.

PARITY: An error checking method. This should be set in accordance with your PTZ system's requirements.

CRUISE: Refers to a mode of operation which can be used for PTZ systems called "Cruise Mode". When using Cruise Mode, the PTZ system can be set up to move constantly, pausing for a user-defined amount of time at preset points. Turning CRUISE off here will mean that the PTZ system can only be moved by the manual controls, and the Start Cruise option on the context menu will simply not function.

ADDRESS: The command address of the PTZ system. Typically, PTZ systems allow the user to define their own command address, usually by the use of a series of dip-switches located somewhere on the PTZ system. Each PTZ device needs a unique address to function correctly.

Remember: After making changes to the settings press/click the APPLY button.

Motion Detection Setup

Here, you'll be able to set the motion detection features of the DVR for each channel. We suggest that motion detection is, under most circumstances, the most practical recording method for the DVR to employ.

How it Works: Once motion detection has been enabled for a channel, it will register to the DVR as an ALARM EVENT. Thus, you can use the ALARM RECORDING mode in the schedule to trigger the DVR to record when motion detection triggers an alarm signal.

Enable: Whether or not motion detection is enabled on a specific channel. Each channel can be configured independently of one another.

Sensitivity: There are eight levels of motion detection sensitivity, 1 being the least sensitive and 8 being the most sensitive. To find the right value for you, we suggest setting it and then testing the chosen setting by getting an able volunteer to move through the camera's view and testing whether or not the motion detection is triggered.

Note: The motion detection feature will seem more sensitive at night, particularly when using low-light or active infrared cameras. We recommend that you test your motion detection sensitivity both during the day and at night to ensure your sensitivity setting is suitable for either lighting condition.

Area: Click the applicable Setup button to setup the motion detection area for that channel. See ***"Motion Detection Area Setup" on page 29*** for details on how to do this, and what it means.

Remember: After making changes to the settings press/click the APPLY button.

About Motion Detection

How Motion Detection Works

The way that the DVR looks for motion is quite straight forward - it's a process where it compares one frame (that is, a single image taken approximately a 25th/30th of a second from the previous image) with the next. A certain amount of "difference" between these two "frames" is interpreted as motion.

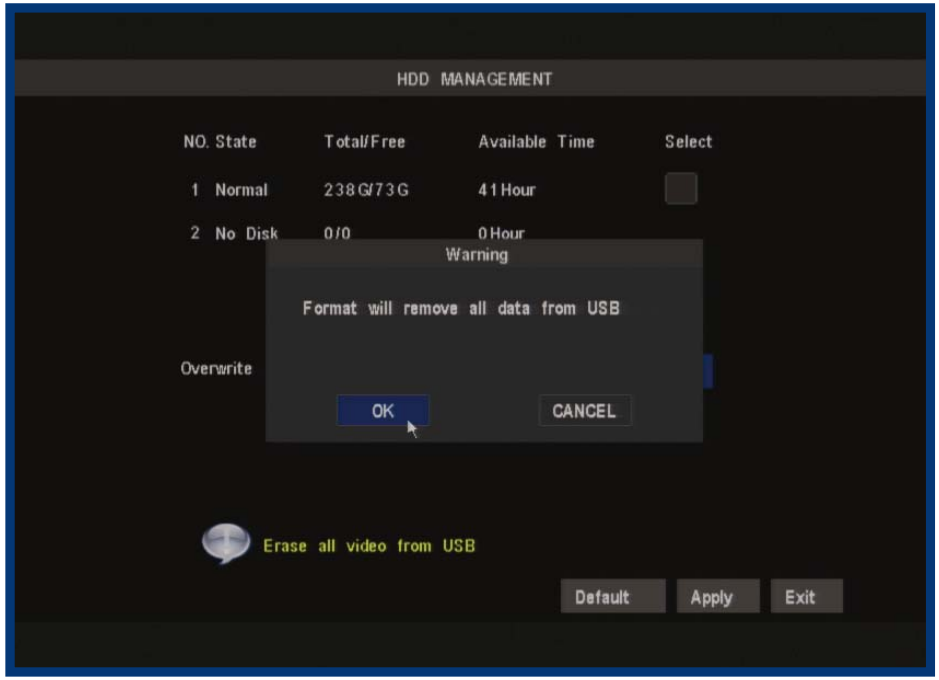
As a result, the DVR is able to detect when there is a change in the picture. However, this does not necessarily need to be something moving in the frame. For example, a light being turned on or off, a lightning flash or even the sun coming out momentarily on a cloudy day might be enough to trigger the motion detection on the DVR. However, as these events last only a moment (and are relatively rare) they will only create a few very short redundant clips, which will not take up too much space or pose a problem with scanning through footage.

This method of motion detection can, however, become problematic when using wireless cameras. As wireless technology is susceptible to interference, the static and image distortion common to wireless systems is often enough to trigger the motion detection inadvertently.

As a result, we **strongly advise against using wireless cameras with any of our motion sensitive recording equipment**, and advise the use of hard wired cameras. If you simply must use wireless technology, we advise using digital wireless technology as this technology is much more resistant to interference from other wireless equipment and environmental causes. However, any wireless technology, digital or otherwise, has serious limitations when combined with motion detection. For a similar reason, don't use PTZ systems and motion detection simultaneously. The DVR will interpret the camera moving as 'motion' and record. This is particularly true when using Cruise Mode - as the camera is moving almost continually, so too is the DVR recording almost continually!

Notes

- Wireless cameras are **not** recommended for use with the motion detection.
- Motion detection is not recommended for use with PTZ systems. Avoid enabling motion detection on a channel which has a PTZ system attached to it - especially when the PTZ system is set to Cruise Mode.
- Setting the motion detection at high sensitivity levels (5 or higher) increases the frequency of false alarms. On the other hand, low sensitivity levels (4 or lower) increase the risk that a significant motion event (such as an intruder) will not trigger the motion detection to record.
- **Check the Motion Detection settings both during the day and at night.** In low-light conditions (or when your cameras are using infrared night vision) the DVR may be more or less sensitive to motion, depending on your unique circumstances. The difference might be very dramatic!



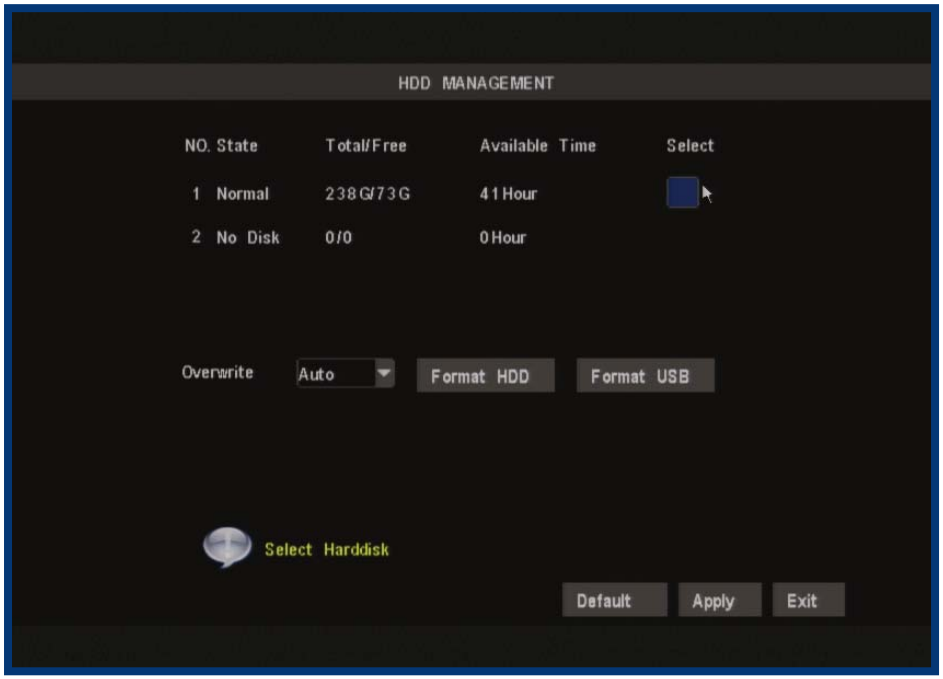
You can choose how much footage the DVR will overwrite by selecting it from this menu. You can set this as low as an hour (where the DVR will only keep up to an hour's worth of footage at a time) or up to 90 days. Alternately, you can leave it on Auto, in which case the DVR will overwrite footage as it deems necessary.

If overwrite is set to DISABLE the DVR will stop recording once the DVR is full. Whilst you won't lose old footage, you run the risk of missing new events as they happen. Be sure you want to do this before selecting it.

HDD FORMAT: Formatting the HDD will erase all data (i.e. footage) which is stored on it, and re-create the FAT (file allocation table). There are some times when using the format option is very useful. For example, if the value displayed in TOTAL SPACE is not correct for the HDD you've installed, or the DVR is displaying errors when trying to write to the hard drive, then a format might fix the problem.

USB FORMAT: If you have a USB flash drive connected to the DVR, this will format it, allowing you to use it in the DVR for backup. This will also erase all the data on the drive, but make the flash drive compatible with the DVR for copying footage. To do this, click the USB FORMAT button and click OK.

HDD Management



This is the **HARD DRIVE (HDD) MANAGEMENT** screen. All aspects of the hard drive can be managed from this screen.

Additionally, this is the place to go if you want to know exactly how much space is left on the hard drive, and how much footage you can record to it.

HDD STATUS: If the hard drive is not installed properly you will see a message saying NO DISK FOUND. The live view screen will display the H icon on the bottom of Channel 1's display if the hard drive is not being detected.

TOTAL SPACE: Total size of the hard drive currently installed.

FREE SPACE: Total amount of free space available on the hard drive(s) currently installed.

AVAILABLE TIME: Free space currently available in hours, calculated based on your current record quality settings. (**Note:** If you have OVERWRITE enabled, this value will be redundant.)

OVERWRITE: When enabled, the DVR will record over the files already stored on the hard drive. Using the overwrite option is advisable, as the DVR will always be able to record events as they happen. However, it does mean that you'll need to get important events off the HDD before they're overwritten.

Motion Detection Area Setup

Say, for example, you are trying to monitor your front yard, whilst in the background there is a busy street, and the cars driving past continually set off the motion detection. What can you do about it? Setting only part of the camera's view to be motion sensitive might be the answer. This is useful in a number of circumstances, such as monitoring one particular door at the end of a busy hallway, or a backyard with a tree that keeps blowing in the wind.

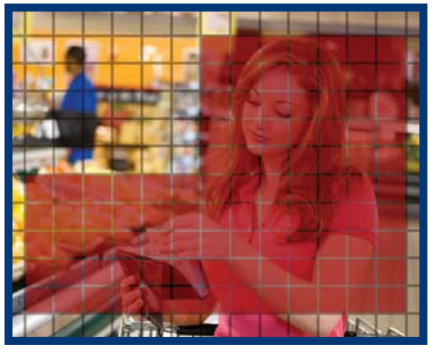
To set the MOTION DETECTION AREA

- In the MOTION DETECTION menu, use the mouse or the arrow buttons to highlight the SETUP button for the channel you wish to setup the MOTION DETECTION AREA for, and confirm by pressing select or left clicking.
- You will see a grid (15 x 12) of red boxes.

The red boxes mark the area that is sensitive to motion.

- Use the arrow buttons or the mouse to move the cursor around the screen.
- By pressing select or left clicking an area in the grid, you can toggle motion detection ON or OFF in that location.
- Areas marked by red boxes will be sensitive to motion, those not marked will not be.
- Click and drag to select the area you want to select or deselect.

In this example, the entire screen area is activated. A sufficient amount of movement (depending on your sensitivity settings) anywhere in the screen will trigger the motion detection.



This example shows the same image, but the top left side of the motion area is not activated, and neither are the edges of the screen. Movement in these areas will not trigger the motion detection.

Network Menu

This is the NETWORK SETUP screen.

This is the most technically complex aspect to setting up the DVR, and does require a working knowledge of network technologies.

If you are unfamiliar with networking, then we suggest talking with a professional - ideally, the same person who installed your network, as they'll know exactly how it's configured and how best to setup the DVR.

Configuring your DVR and your home network can be a tricky process - and these two pages are not nearly long enough to cover it. See ***"Remote Access" on page 62*** (and what follows) for more information.

TYPE: Here you can choose between the three different types of networks that the DVR can be connected to. The three types of networks are:

DHCP: DHCP (Dynamic Host Configuration Protocol) is a system where one device on your network (usually a router) will automatically assign IP addresses to devices connected to the network.

STATIC: Static networks require all devices need to have their IP addresses manually defined, as there is no device dedicated to automatically assigning addresses.

PPPoE: PPPoE (Point to Point Protocol Over Ethernet) is an advanced protocol which allows the DVR to be connected directly to a DSL line, without the need for a router or gateway. *This protocol is for advanced users only.*

Remember: After making changes to the settings press/click the APPLY button.

Device Management

HDD: For accessing information about your hard drive. This is where you go to correct or analyze any problem with your hard drive. Additionally, you'll be able to see at a glance how much recording time you have left at your current quality settings, as well as being able to format (erase all data from) the hard drive here. You can format flash drives from this screen as well.

Alarm: For configuring the DVR's internal buzzer and auto-email settings.

PTZ: The setup window for configuring the DVR to act as a PTZ (Pan, Tilt, Zoom) controller. Recommended for advanced users. ***Requires a compatible PTZ camera to be connected correctly to the DVR to function.***

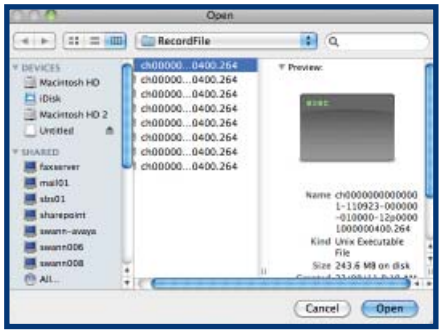
Remember: After making changes to the settings press/click the APPLY button.

Playback Controls

The Toolbar

The playback controls are located at the bottom of the playback interface. They operate in the same manner as those found on the DVR's playback interface (see ***"Playback" on page 37***).

Managing the Playlist: Opening Files

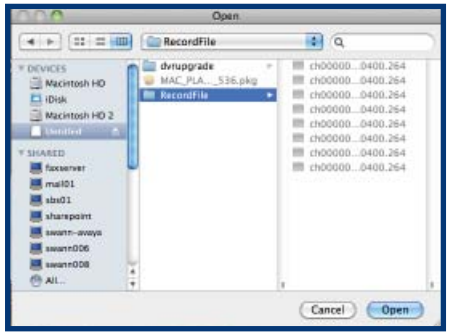


The Open Files Dialog

- You can choose to open either individual FILES or an entire FOLDER worth of files at once.
- The button will allow you to open a folder full of files as a single playlist. Typically, this will be in a folder called **RecordFile** located on the flash drive you used to backup footage.
- To open single files, choose . You'll need to locate the files using a standard file browser (below), and then simply highlight the files you want and choose OPEN.

Managing the Playlist: Removing Files

To remove a file from the playlist, highlight it and click the button. The button removes a files from the playback list.



The Open Folder Dialog

Remember: After making changes to the settings press/click the APPLY button.

UPnP (Universal Plug and Play): UPnP is a technology which makes configuring your network easier and faster. To use the UPnP setting on the DVR, you'll need a router which supports the feature, with UPnP enabled. Note that many routers which do support UPnP do not come with the feature enabled by default.

When UPnP is enabled on both your DVR and router, the **Ports** that the DVR requires to be open for access to and from the Internet will automatically be opened and closed as necessary by your router, saving you the trouble of manually forwarding these ports. If UPnP is not enabled, or your router does not support the feature, you'll need to forward the ports the DVR uses from the router to the DVR - since this is a technically challenging process, we strongly recommend using UPnP if possible.

For more information on UPnP and Ports,
see ***"Remote Access: Ports and UPnP" on page 63.***

MEDIA PORT: This is the port that the DVR will use to send information through. The most important things are that:

1. You'll need to enable UPnP on your router (see ***"Remote Access" on page 62***) so your router can selectively open these ports, allowing the DVR to communicate via the Internet. If your router doesn't support UPnP, you have two options. You can either get a new router (which we'd actually recommend - UPnP is such a good feature!) or you can manually forward ports from the router to the DVR. Port forwarding is a technical and involved process, recommended only for the technically inclined.
2. Nothing else share this port. The default port number is 9000, which is not used by many other devices/programs. However, particularly if you have another DVR or DVR-like device, something might be using this port already. If this is the case, change this value to be unique.

WEB PORT: This is the port through which you will be able to communicate with the DVR. Like the MEDIA PORT, it will need to be forwarded properly in order to ensure smooth, latency-free communication. The default value is "85", as this port is seldom used by other devices or applications. If there is another device on your network using this port, you'll need to change it to be unique.

MOBILE PORT: This is the port number that the DVR will use when connected to a mobile device (such as a compatible phone, tablet or similar device). Like the other PORT values, this must be unique. The default is "18004".

IP ADDRESS: Just as houses and businesses need to have an address which identifies their location on the road network, so too do computers and other devices need addresses (called IP ADDRESSES) to identify their position on the electronic network. The DVR uses IPv4 addressing, which consists of four groups of numbers between 0 and 255, separated by periods. For example, a typical IP address might be "192.168.1.24" or something similar. The most important thing when setting the IP address is that nothing else on your network shares that IP address.

Remember: After making changes to the settings press/click the APPLY button.

NETMASK (SUBNET MASK): If the IP address is like a street address, then a sub-network is like your neighborhood. This will be formatted in a similar way to the IP address (ie. four numbers up to 255 separated by periods) but contain very different numbers. In the above example, the Subnet Mask might be something like: "255.255.255.0".

GATEWAY: This is the address of the "way to the Internet" - to continue the road analogy, this is like your local access point to the highway. This is an IP address in the same format as the others, and is typically very similar to the IP address of the DVR. To continue the above examples, it might be something such as: "192.168.1.254".

DNS: "Domain Name System". Everything on the Internet is located via an IP address - however, for ease of use, we associate domain names (such as "www.exampledomainname.com") with those IP addresses. This index is accessible in many locations online, and we call those locations "DNS servers".

DNS for STATIC configuration: Under most circumstances, you can set the DNS Server address to be the same address as your router (this is usually the same address as *Gateway*).

DNS for DHCP configuration: Typically, the DNS Server address will automatically be detected by the DVR. In some cases, you'll need to enter a value - the address of your router (the same as the *Gateway*) should work.

Remember: After making changes to the settings press/click the APPLY button.

Playing Backed Up Footage on a Mac

Got a Mac? No problems. The CD contains a version of the playback software for ***Mac OS X***.

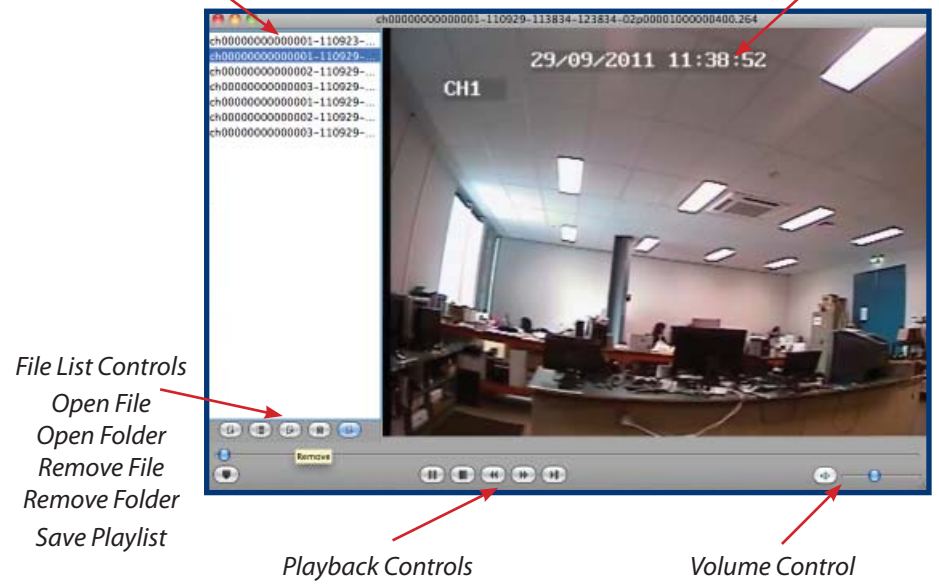
Installing the Playback Software

To install the playback software, locate the MAC OS installation file on the included CD named "*Mac_Player_vX*". We are constantly making updates and improvements to our software, so "X" will be the version number. Run this setup file.

Follow the installation prompts - you'll be asked where you'd like to install the software and the shortcuts to access it. We suggest that the default options are usually the best choice - only change these if you have a very specific idea about where you want the software to be installed. Once you've made these choices, simply wait while the installation is processed.

NOTE: This software is compatible with Mac OS X operating systems only.

The Playback Interface

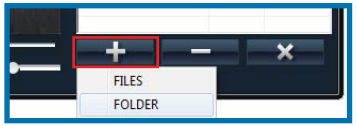


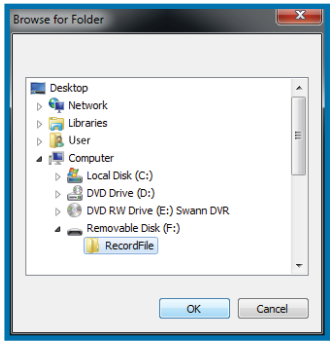
Remember: After making changes to the settings press/click the APPLY button.

The Playback Interface

Assuming that you've used the default installation paths, you can access the playback software by selecting the desktop icon named **Playback Software**, or finding the program group of the same name in your **Start Menu**.

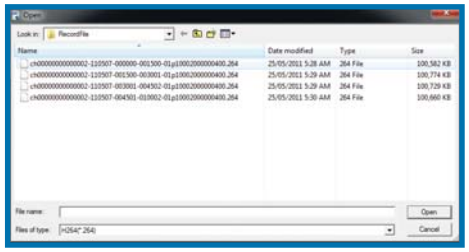
This will take you to the default interface of the playback software, as shown to the right.





Opening Files:

- Choose the + icon, and select either FILES or FOLDER.
- If you chose to open a FOLDER, select the folder you'd like to open from the file tree. Typically, this will be X:\RecordFile (where "X" is the drive letter assigned to your flashdrive).
- To open single files, choose FILES. You'll need to locate the files using a standard file browser (below), and then simply highlight the files you want and choose OPEN.



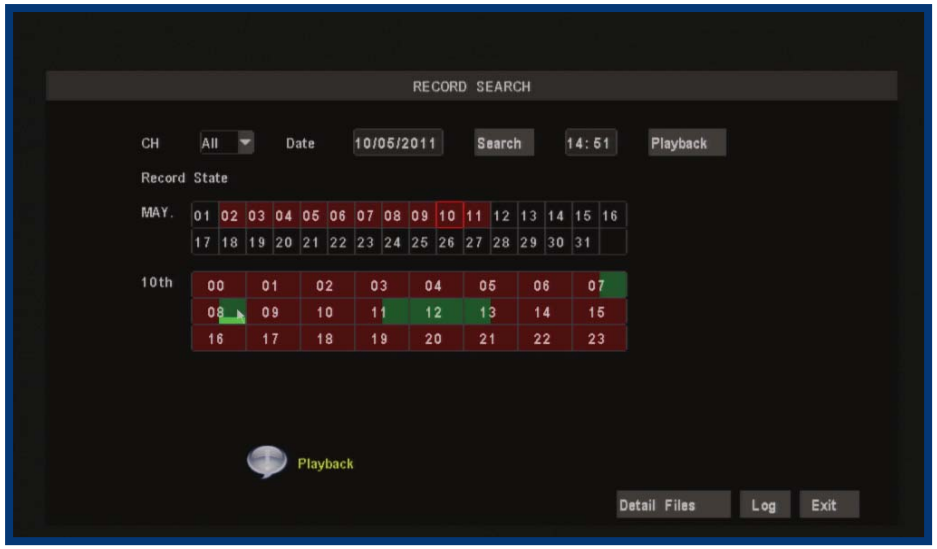
To remove a file from the playlist, highlight it and click the **−** button.

The **X** button removes all files from the playback list.

Playback Controls

The playback controls are located at the bottom of the playback interface. They operate in the same manner as those found on the DVR's playback interface (see ***"Playback" on page 37***).

The camera icon (located in the centre of the playback controls) will save a screenshot as a BMP (bitmap) file to **C:\Capture**



Video Search

In the VIDEO SEARCH screen you can search for a specific day for a recording and view it in playback mode. This is useful for hunting a specific recording of an incident if you know the time and date it occurred. To search you need to input the date of the video then select the hour of the recording.

Note that if you don't know the exact day you want to search input just 01, then the MONTH & YEAR then click the SEARCH button.

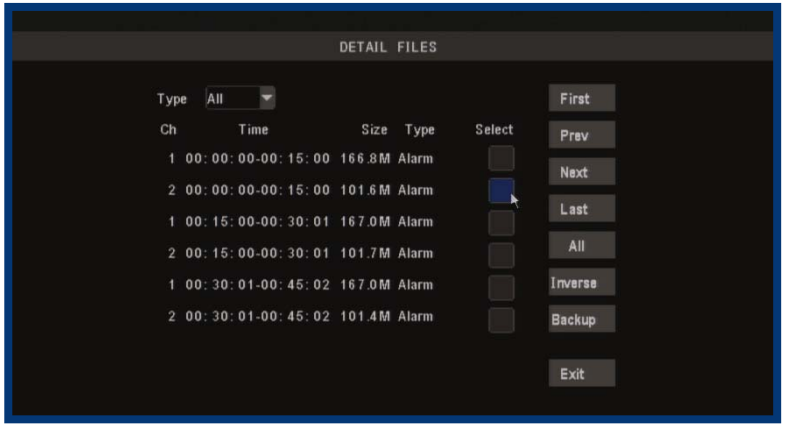
All the days for that month will appear on the monthly calender. The highlighted days are the days with recordings, color coded to represent the recording mode which triggered the recording at the time (where red = alarm recording; green = normal recording).

To execute a Video Search:

- Scroll over then left click the date numeric field, or highlight it using the arrow keys and press select.
- Select a digit to alter. Once selected, it will be highlighted green and can be edited. You will see a grey pop up keypad. Scroll or move over the digits on the keypad & left click or press select to input the date. Note that the first two digits of the year (2 & 0) cannot be changed.
- Highlight the SEARCH button, and left click or press select.
- To be taken straight the Playback interface (bypassing the File List) choose PLAYBACK instead of SEARCH. Playback will start with the first recording made during the interval chosen.

Remember: After making changes to the settings press/click the APPLY button.

Detail Files and Log List



The Detail Files Screen

This is the main screen you'll use when locating specific incidents and recordings. It's also where you'll need to go to perform a backup to a USB flash drive.

For more about using the File List to perform a backup, see ***"USB Backup" on page 35***.

Log List Screen

The event log records all the "events" that the DVR detects, even the ones you've otherwise told it to ignore.

Type: The type of event the DVR has detected.

Content: The conditions which triggered the type of event, such as motion detected (MD) or a hard drive failure (HDD) and so on.

Time Point: When the event occurred.

Record: Whether the DVR recorded any footage as a result of the event. Typically, this will depend on whether the DVR is in ALARM RECORDING mode when the event occurred.

Remember: After making changes to the settings press/click the APPLY button.

Playing Backed Up Footage on a PC

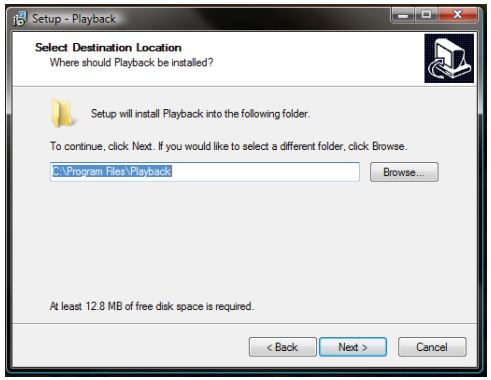
The video files which the DVR backs up are not playable by standard multimedia software. This means that your usual media player is not going to be able to open or display footage from the DVR. The main reason for this is that footage from the DVR is always made of multiple channels of video which are synchronised into one data stream. The playback software is included on the CD that comes with the DVR.

Installing the Playback Software

To install the playback software, locate the file on the included CD named "Playback-vX". We are constantly making updates and improvements to our software, so "X" will be the version number. Run this setup file.

Follow the installation prompts - you'll be asked where you'd like to install the software and the shortcuts to access it. We suggest that the default options are usually the best choice - only change these if you have a very specific idea about where you want the software to be installed. Once you've made these choices, simply wait while the installation is processed.

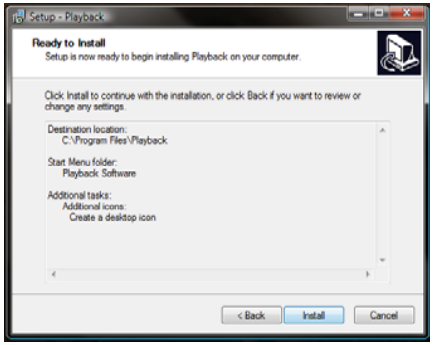
NOTE: This software is compatible with Windows operating systems only (XP and more recent versions).


Setup - Playback
Select Destination Location
Where should Playback be installed?
Setup will install Playback into the following folder.
To continue, click Next. If you would like to select a different folder, click Browse.
C:\Program Files\Playback
Browse...
At least 12.8 MB of free disk space is required.
< Back
Next >
Cancel

Choose a folder to install the playback software. Unless you have a really specific location in mind, the default works fine.

Choose **Next** to continue.

Confirm that the path displayed matches the one you chose, and click **Install** to complete the process.


Setup - Playback
Ready to Install
Setup is now ready to begin installing Playback on your computer.
Click Install to continue with the installation, or click Back if you want to review or change any settings.
Destination location:
C:\Program Files\Playback
Start Menu folder:
Playback Software
Additional tasks:
Additional icons:
Create a desktop icon
< Back
Install
Cancel

Playback Controls

The playback controls work in a similar manner to those you'll find on a DVD player or VCR. The playback controls affect all channels being played back simultaneously.

Rewind: Reverses the footage. Pressing this button multiple times will increase the speed at which the footage plays in reverse. Note that, as the H.264 compression used to encode the video is designed to play forwards, it requires considerably more processing power to decode in reverse. For this reason, playback in reverse will not be smooth.

Slow: Press to slow down playback. Pressing once will reduce the playback speed to ½ speed, pressing it again will slow the speed to ¼, and pressing it a third time will reduce the speed to ⅛. Press **Play** to return to normal speed playback.

Play: Will play footage if paused, or return to normal speed playback during **Fast Forward** or **Rewind**.

Pause: Will pause playback, retaining still images on the screen. Press **Play** to resume.

Fast Forward: Increases the speed of playback. Pressing the button multiple times will increase the rate of playback by 2x, 4x, 8x and 16x. Press **Play** to return to normal speed playback.

Mute: Checking this box will stop audio playback. It will not affect the audio track on the recorded footage.

Volume Bar: Adjusts the volume during playback. For the best audio quality this should be set relatively high, with the volume of the television or stereo system turned down appropriately.

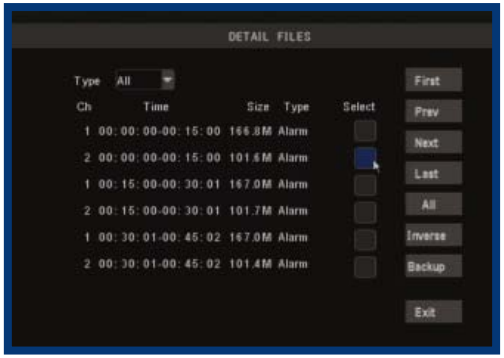
Volume Level: A numerical representation of the current volume, as set on the **Volume Bar**.

Close Playback: Closes the playback window and returns you to the event list.

Preparing a USB Flash Drive

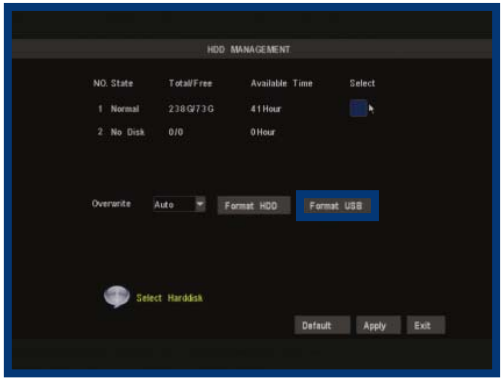
Most, but not all, USB flash drives are compatible with the DVR.

The flash drive will have to be formatted with the correct file structure, which is FAT32. This can be done via a compatible computer, or you can have the DVR itself format the USB flash drive.



To format your USB flash drive:

- Insert the flash drive into the USB slot on the rear of the DVR.
- Open the **Main Menu**, select **Device Management,** then select **HDD Management**.
- Choose the **FORMAT USB** option. The process will take a few moments, depending on the size of the USB flash drive.



Above: The **HDD Managment** menu, with the **FORMAT USB** button highlighted.

Be sure there's no data you want to keep on the USB flash drive when you format it, as the formatting process removes all data.

Remember: After making changes to the settings press/click the APPLY button.

USB Backup Instructions

- First, insert a USB flash drive into the USB port on the rear of the DVR. Inserting a flash drive into the mouse port will not work correctly.
- Make sure there are no files on the USB flash drive that you wish to keep, as data already on the drive may be lost (whether or not you use the FORMAT option).
- If you need to format the USB flash drive, see the **USB Format** option in the **HDD Drive Menu**, covered on ***"HDD Management" on page 44***.
- Open the **Detail Files** screen - see ***"Detail Files and Log List" on page 34***.
- Locate the file(s) you wish to copy.
- Highlight the **Select** check-boxes which correspond to the recordings that you wish to backup, and left click or press select.
- You can backup multiple recordings at once, as long as their cumulative size will fit on the USB flash drive you have inserted into the DVR.
- Choose **Backup**.

Notes:

Backing up footage is not an instant process. Copying the footage to the USB device may be a time consuming process, though it's usually much quicker than the amount of footage you're backing up (typically about 150MB/minute, which equates to approximately 6 minutes per GB).

There are many factors which will affect the amount of time the DVR requires to copy all the footage you've selected to the USB drive, and these include:

- The quality/resolution/framerate settings of the channel(s) being backed up.
- The speed of the USB flash drive used.
- The size and amount of free space remaining on the USB flash drive you use.

The backed up footage is stored on the flash drive in the same format as it is stored on the DVR. This means that the backed up footage will not play in a computer as a standard video file - you'll need to use the dedicated playback software which comes on the mini-CD included with the DVR. Instructions on how to install and use this software can be found later in this manual.

This is an example of the PLAYBACK interface, currently showing quad view.

Channels 1, 3 and 4 were not recording at this time.

The playback controls are displayed across the bottom of the screen. They are as follows:

Rewind Slow Play Pause Fast Forward

Mute Volume Bar Volume Level Close Playback

Remember: After making changes to the settings press/click the APPLY button.